SOLICITATION/CONTRACT/ORDER FOR COMMERCIAL ITEMS *OFFEROR TO COMPLETE BLOCKS 12, 17, 23, 24, & 30.*			1. REQUISITION NUMBER A2466714N	PAGES 1 OF (1) PAGE(S)
2. CONTRACT NO. GS08T12BPA0005	3. AWARD/EFFECTIVE DATE 04/24/2012	4. ORDER NUMBER GST0812BP0055	5. SOLICITATION NUMBER ID08120033	6. SOLICITATION ISSUE DATE 2012-03-30
7. FOR SOLICITATION INFORMATION CALL:	a. NAME Heidi Sawyer		b. TELEPHONE NUMBER *(No Collect Calls)* 303-236-5032	8. OFFER DUE DATE/ LOCAL TIME 04/06/2012

9. ISSUED BY	10. THIS ACQUISITION IS	11. DELIVERY FOR FOB DESTINATION UNLESS BLOCK IS MARKED	12. DISCOUNT TERMS
GSA Region 8 Heidi N Sawyer PO Box 25530 Denver, CO 80225 United States (303) 236-5032	☑ UNRESTRICTED ☐ SET ASIDE: % FOR ☐ SMALL BUSINESS ☐ HUBZONE SMALL BUSINESS ☐ 8(A) NAICS: SIC: 541990 SIZE STANDARD: $14.0	Destination ☐ 13a. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 700) 13b. RATING 14. METHOD OF SOLICITATION RFQ	NET 30 DAYS / 0.00 % 0 DAYS / 0.00 % 0 DAYS

15. DELIVER TO	16. ADMINISTERED BY
Andrew J Berry 2354 Fairchild Drive Suite 4K25 USAFA, CO 80840 United States (719) 235-7724	Heidi N Sawyer (303) 236-5032
17a. CONTRACTOR/ OFFEROR	**18a. PAYMENT WILL BE MADE BY**
Parimal Joshi SOFTEC SOLUTIONS INC. 384 INVERNESS PKWY STE 211 ENGLEWOOD, CO 80112-5823 United States (303) 483-2114	Finance Operations and Disbursement Branch (BCEB) 299X PO Box 219434 Kansas City, MO 641219434 United States
17b. ☐ CHECK IF REMITTANCE IS DIFFERENT AND PUT SUCH ADDRESS IN OFFER	18b. SUBMIT INVOICES TO ADDRESS SHOWN IN BLOCK 18a UNLESS BLOCK BELOW IS CHECKED

19. ITEM NO	20. SCHEDULE OF SUPPLIES/SERVICES	21. QUANTITY	22. UNIT	23. UNIT PRICE	24. AMOUNT
ITEM NO.	TASK ITEM DESCRIPTION		PREVIOUS MOD AMT	MOD CHANGE AMT	NEW MOD AMT
001	USAFA IITA BPA ORDER 001 Base Year		$0.00	$209,554.00	$209,554.00

This order was issued as a verbal order on April 24, 2012 via electronic mail. RFQ ID08120033 is hereby definitized as Call Order GST0812BP0055 to IITA BPA number GS08T12BPA0005 issued against Softec Solutions Inc GSA Schedule 70 contract number GS-35F-0036P.

Work shall be performed in accordance with the performance work statement (attached) for the Institute for Information Technology Applications (IITA) WEdge Shuttle DR Fixes and IT Support, and the contractor's quotation dated April 6, 2012 and is hereby incorporated by reference in its entirety. This contract is incrementally funded in accordance with DFARS Clause 252.232-7007, Limitation of Government's Obligation.

Original verbal order issued on April 24, 2012 funded amount $202,082.60

Incremental funding is hereby added on June 4, 2012 in the amount of $7,471.40.

The order is fully funded for the base period at $209,554. The base period is changed to correctly reflect the start date: April 24, 2012 through April 23, 2013.

Unfunded Options (corrected period of performance dates):
CLIN 0002 WEdge Shuttle IT Support 1 Job, $139,080
Option Period 1: April 24, 2013 through April 23, 2014

CLIN 0003 WEdge Shuttle IT Support 1 Job $139,080
Option Period 2: April 24, 2014 through April 23, 2015

CLIN 0004 WEdge Shuttle IT Support 1, Job $139,080
Option Period 3: April 24, 2015 through April 23, 2016

25. ACCOUNTING AND APPROPRIATION DATA	26. TOTAL AWARD AMOUNT *(For Govt. Use Only)*
299X.A08VE110.F6.25.C01.H08...	$209,554.00

☐ 27a. SOLICITATION INCORPORATES BY REFERENCE FAR 52.212-1, 52.212-4. FAR 52.212-3 and 52.212-5 ARE ATTACHED. ADDENDA ATTACHED.

☐ 27b. CONTRACT/PURCHASE ORDER INCORPORATES BY REFERENCE FAR 52.212-4. FAR 52.212-5 IS ATTACHED.

ADDENDA ATTACHED.				
28. CONTRACTOR IS NOT REQUIRED TO SIGN THIS DOCUMENT AND RETURN COPIES TO ISSUING OFFICE. ☐ CONTRACTOR AGREES TO FURNISH AND DELIVER ALL ITEMS SET FORTH OR OTHERWISE IDENTIFIED ABOVE AND ON ANY ADDITIONAL SHEETS SUBJECT TO THE TERMS AND CONDITIONS SPECIFIED HEREIN.		29. AWARD OF CONTRACT: REFERENCE your OFFER DATE 2012-04-06. YOUR OFFER ON SOLICITATION (BLOCK 5) INCLUDING ANY ADDITIONS OR CHANGES WHICH ARE SET FORTH HEREIN, IS ACCEPTED AS TO ITEMS:		
30a. SIGNATURE OF OFFEROR/CONTRACTOR		31a. UNITED STATES OF AMERICA *(SIGNATURE OF CONTRACTING OFFICER)* Heidi N Sawyer		
30b. NAME AND TITLE OF SIGNER *(Type or print)*	30c. DATE SIGNED	31b. NAME OF CONTRACTING OFFICER *(Type or print)* Heidi N Sawyer (303) 236-5032		31c. DATE SIGNED 2012-06-04
32a. QUANTITY IN COLUMN 21 HAS BEEN		32b. SIGNATURE OF AUTHORIZED GOVT. REPRESENTATIVE		32c. DATE
32d. PRINTED NAME AND TITLE OF AUTHORIZED GOVERNMENT REPRESENTATIVE		32f. TELEPHONE NUMBER OF AUTHORIZED GOVERNMENT REPRESENTATIVE		
32e. MAILING ADDRESS OF AUTHORIZED GOVERNMENT REPRESENTATIVE		32g. E-MAIL OF AUTHORIZED GOVERNMENT REPRESENTATIVE		
33. SHIP NUMBER	34. VOUCHER NUMBER	35. AMOUNT VERIFIED CORRECT FOR	36. PAYMENT	
37. CHECK NUMBER		38. S/R ACCOUNT NUMBER	39. S/R VOUCHER NUMBER	40. PAID BY
41a. I CERTIFY THIS ACCOUNT IS CORRECT AND PROPER FOR PAYMENT		42a. RECEIVED BY *(Print)*		
41b. SIGNATURE AND TITLE OF CERTIFYING OFFICER GSA Finance Customer Support 816-926-7287	41c. DATE	42b. RECEIVED AT *(Location)*		
		42c. DATE REC'D *(YY/MM/DD)*	42d. TOTAL CONTAINERS	
AUTHORIZED FOR LOCAL REPRODUCTION	SEE REVERSE SIDE FOR OMB CONTROL NUMBER AND PAPERWORK BURDEN STATEMENT			**STANDARD FORM 1449** (REV. 4-2002) Prescribed by GSA - FAR (48 CFR) 53.212

SOLICITATION/CONTRACT/ORDER FOR COMMERCIAL ITEMS
OFFEROR TO COMPLETE BLOCKS 12, 17, 23, 24, & 30

1. REQUISITION NUMBER	PAGE 1 OF

2. CONTRACT NO.	3. AWARD/EFFECTIVE DATE	4. ORDER NUMBER	5. SOLICITATION NUMBER	6. SOLICITATION ISSUE DATE
TBD	04/19/2012	GS08T12BPA0005	ID08120033	03/30/2011

7. FOR SOLICITATION INFORMATION CALL:	a. NAME	b. TELEPHONE NUMBER *(No collect calls)*	8. OFFER DUE DATE/ LOCAL TIME
	HEIDI SAWYER	303.236.5032	04/06/2011

9. ISSUED BY	CODE	10. THIS ACQUISITION IS
GSA Region 8 Heidi Sawyer PO Box 25526 Denver, CO 80225 United States	8QZA	☒ UNRESTRICTED OR ☐ SET ASIDE: ____ % FOR: ☐ SMALL BUSINESS ☐ EMERGING SMALL BUSINESS NAICS: 541990 ☐ HUBZONE SMALL BUSINESS SIZE STANDARD: ☐ SERVICE-DISABLED VETERAN-OWNED SMALL BUSINESS ☐ 8 (A)

11. DELIVERY FOR FOB DESTINATION UNLESS BLOCK IS MARKED	12. DISCOUNT TERMS	13a. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 700)	13b. RATING 14. METHOD OF SOLICITATION
☒ SEE SCHEDULE		☐	☒ RFQ ☐ IFB ☐ RFP

15. DELIVER TO	CODE	16. ADMINISTERED BY	CODE
U.S. Air Force Academy, Colorado Springs, CO		Heidi Sawyer GSA Region 8	8QZA

17a. CONTRACTOR/ OFFEROR	CODE	FACILITY CODE	18a. PAYMENT WILL BE MADE BY	CODE
SOFTEC SOLUTIONS INC. 384 INVERNESS PARKWAY, STE 211 ENGLEWOOD, CO 80112-5823 TELEPHONE NO.			Finance Operations and Disbursement Branch (BCEB) 299X PO Box 219434 Kansas City, MO 641219434	BCEB

☐ 17b. CHECK IF REMITTANCE IS DIFFERENT AND PUT SUCH ADDRESS IN OFFER

18b. SUBMIT INVOICES TO ADDRESS SHOWN IN BLOCK 18a UNLESS BLOCK BELOW IS CHECKED ☐ SEE ADDENDUM

19. ITEM NO.	20. SCHEDULE OF SUPPLIES/SERVICES	21. QUANTITY	22. UNIT	23. UNIT PRICE	24. AMOUNT
	This call order number XXXX is issued in accordance with the terms and conditions of the SofTec Solutions, Inc. BPA GS08T12BPA0005. Work shall be performed in accordance with the performance work statement attached for the Institute for Information Technology Applications (IITA) WEdge Shuttle DR Fixes and IT Support and is incorporated by reference, and the contractors quotation submitted on April 6, 2012, is *(Use Reverse and/or Attach Additional Sheets as Necessary)*				

25. ACCOUNTING AND APPROPRIATION DATA

26. TOTAL AWARD AMOUNT *(For Govt. Use Only)*

☒ 27a. SOLICITATION INCORPORATES BY REFERENCE FAR 52.212-1, 52.212-4. FAR 52.212-3 AND 52.212-5 ARE ATTACHED. ADDENDA ☒ ARE ☐ ARE NOT ATTACHED

☐ 27b. CONTRACT/PURCHASE ORDER INCORPORATES BY REFERENCE FAR 52.212-4. FAR 52.212-5 IS ATTACHED. ADDENDA ☐ ARE ☐ ARE NOT ATTACHED

☐ 28. CONTRACTOR IS REQUIRED TO SIGN THIS DOCUMENT AND RETURN ____ COPIES TO ISSUING OFFICE. CONTRACTOR AGREES TO FURNISH AND DELIVER ALL ITEMS SET FORTH OR OTHERWISE IDENTIFIED ABOVE AND ON ANY ADDITIONAL SHEETS SUBJECT TO THE TERMS AND CONDITIONS SPECIFIED

☒ 29. AWARD OF CONTRACT: REF. SofTec's OFFER DATED 04/06/2012. YOUR OFFER ON SOLICITATION (BLOCK 5), INCLUDING ANY ADDITIONS OR CHANGES WHICH ARE SET FORTH HEREIN, IS ACCEPTED AS TO ITEMS:

30a. SIGNATURE OF OFFEROR/CONTRACTOR	31a. UNITED STATES OF AMERICA *(SIGNATURE OF CONTRACTING OFFICER)*
(b) (6)	

30b. NAME AND TITLE OF SIGNER *(Type or print)*	30c. DATE SIGNED	31b. NAME OF CONTRACTING OFFICER *(Type or print)*	31c. DATE SIGNED
MARTIN A. PAYNE VP Program Mgt	4/23/12		

AUTHORIZED FOR LOCAL REPRODUCTION
PREVIOUS EDITION IS NOT USABLE

STANDARD FORM 1449 (REV. 3/2005)
Prescribed by GSA - FAR (48 CFR) 53.212

19. ITEM NO.	20. SCHEDULE OF SUPPLIES/SERVICES	21. QUANTITY	22. UNIT	23. UNIT PRICE	24. AMOUNT
	incorporated by reference in its entirety. This contract is incrementally funded in accordance with DFARS Clause 252.232-7007, Limitation of Government's Obligation.				
CLIN 001	WEdge Shuttle DR Fixes and IT Support Base Period: April 19, 2012 to April 18, 2013	1	JB	202,082.6	$202,082.60
CLIN 002	WEdge Shuttle IT Support Option Period 1: April 19, 2013 to April 18, 2014	1	JB	139,080	$139,080.00
CLIN 003	WEdge Shuttle IT Support Option Period 2: April 19, 2014 to April 18, 2015	1	JB	139,080	$139,080.00
CLIN 004	WEdge Shuttle IT Support Option Period 3: April 19, 2015 to April 18, 2016	1	JB	139,080	$139,080.00

32a. QUANTITY IN COLUMN 21 HAS BEEN

☐ RECEIVED ☐ INSPECTED ☐ ACCEPTED, AND CONFORMS TO THE CONTRACT, EXCEPT AS NOTED: _____

32b. SIGNATURE OF AUTHORIZED GOVERNMENT REPRESENTATIVE	32c. DATE	32d. PRINTED NAME AND TITLE OF AUTHORIZED GOVERNMENT REPRESENTATIVE

32e. MAILING ADDRESS OF AUTHORIZED GOVERNMENT REPRESENTATIVE	32f. TELPHONE NUMBER OF AUTHORZED GOVERNMENT REPRESENTATIVE 32g. E-MAIL OF AUTHORIZED GOVERNMENT REPRESENTATIVE

33. SHIP NUMBER ☐ PARTIAL ☐ FINAL	34. VOUCHER NUMBER	35. AMOUNT VERIFIED CORRECT FOR	36. PAYMENT ☐ COMPLETE ☐ PARTIAL ☐ FINAL	37. CHECK NUMBER

38. S/R ACCOUNT NO.	39. S/R VOUCHER NUMBER	40. PAID BY

41a. I CERTIFY THIS ACCOUNT IS CORRECT AND PROPER FOR PAYMENT		42a. RECEIVED BY *(Print)*	
41b. SIGNATURE AND TITLE OF CERTIFYING OFFICER	41c. DATE	42b. RECEIVED AT *(Location)*	
		42c. DATE REC'D *(YY/MM/DD)*	42d. TOTAL CONTAINERS

Institute for Information Technology Applications
Blanket Purchase Agreement

CALL ORDER GST0812BP0055

GSA Project Number ID08120033
Issued to Softec Solutions, Inc., BPA No. GS08T12BPA0005
GSA Schedule 70 No. GS-35F-0036P

Wedge Shuttle DR Fixes and IT Support

LOCATED AT

United States Air Force Academy
Colorado Springs, Colorado

Awarded by
U.S. General Services Administration
Federal Acquisition Service, Office of Assisted Acquisitions
Rocky Mountain Region

Verbal Award Issued: April 24, 2012
ITSS Award Issued: June 4, 2012

1.0 CALL ORDER SPECIFICS

Call order (hereafter referred to as Order) is in accordance with multiple award GSA Blanket Purchase Agreement (BPA) for Institute of Information Technology Applications (IITA) GS08T12BPA0005 awarded to SofTec Solutions, Inc.

Order is submitted as firm-fixed price professional services and does not include requirements for travel or other direct costs.

The performance period to complete tasks outlined in the Performance Work Statement (PWS) is one year with three one year options.

1.1 Order Pricing

Pricing shall be submitted on Table 1.0 Price and Cost Schedule.

ITEM No.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
0001	Labor (FFP) to successfully perform services IAW PWS Task 1, Wedge Shuttle Fixes	2	MO		$70,474.00
0002	Labor (FFP) to successfully perform services IAW PWS Task 2 IT Network Support	12	MO		$139,080
OPTION 1001	Labor (FFP) to successfully perform services IAW PWS Task 2 IT Network Support	12	MO		$139,080
OPTION 2001	Labor (FFP) to successfully perform services IAW PWS Task 2 IT Network Support	12	MO		$139,080

OPTION 3001	Labor (FFP) to successfully perform services IAW PWS Task 2 IT Network Support	12	MO		$139,080

1.2 Contracting Office

This call order is issued and administered through GSA Federal Acquisition Services (FAS) Region 8.

Award activities will be conducted through:

Contracting Officer
Heidi Sawyer
Phone Number: 303.236.5032
Electronic Mail: heidi.sawyer@gsa.gov

Contract Specialist
Kortni Nevins
Phone Number: 303.236.1927
Electronic Mail: kortni.nevins@gsa.gov

Administration activities will be conducted through:

Contracting Officer
Shana Budd
Phone Number: 303.236.7374
Electronic Mail: shana.budd@gsa.gov

Contract Specialist
Kortni Nevins
Phone Number: 303.236.1927
Electronic Mail: kortni.nevins@gsa.gov

1.4 Invoice Submission

Invoices shall be submitted in accordance with BPA Contract GS08T12BPA000X, Section 6.0 Invoice Submission and Requirements.

Contract Number: GS08T12BPA0005
Call Order Number: GST0812BP0055
ITSS Project Number: ID08120033
Project Title: WEdge Shuttle DR Fixes and IT Support Project ID

2.0 ADDITIONAL TERMS AND CONDITIONS

FAR 52.217-8 Option to Extend Services (NOV 1999)

30 days

FAR 52.219-9 Option to Extend Term of the Contract (MAR 2000)

30 days; 60 days: five years

3.0 ATTACHMENTS, APPENDICES, AND EXHIBITS

3.1 Attachment 1 – Performance Work Statement

3.2 Attachment 2 – Quality Assurance Surveillance Plan

3.3 Attachment 3 – SVD Shuttle V1.2.0

United Air Force Academy (USAFA)

Blanket Purchase Agreement
CALL ORDER

WEdge Shuttle DR Fixes and IT Support
Performance Work Statement (PWS)

30March 2012

1 DESCRIPTION OF SERVICES

1.1 Description

This call order is issued for support of Information Technology and Software Maintenance for the Headquarters, USAF Academy, Department of Education, Institute for Information Technology Applications (HQ USAFA/DFEI), henceforth referred to as Institute for Information Technology Applications (IITA).

1.2 Background

The WEdge Shuttle was found to have design flaws after detailed testing and analysis. These errors are not huge efforts but the core engine needs to be analyzed and refactored slightly to fix errors. (Task 1)

The Warfighter's Edge development network is part of the Defense Research and Engineering Network (DREN) at USAFA. This includes network support of three separate buildings with infrastructure from a separate network brand new server room. Additionally, small computer support with maintenance of network software products. (Task 2)

1.3 Objective

The objective is to support Information Technology of the Warfighter's Edge development network and software maintenance of the WEdge Shuttle fixing known issues.

The Government assumes technical aspects of the Contractor's BPA will be used as a baseline approach to meet the requirements of this call order. Additional information may be requested through plans and deliverables specific to the tasks of this order, and will be used to evaluate the contractor's performance of the work required by this call order.

1.4 Scope

The scope of this effort is limited to defect fixes around the WEdge Shuttle and the Tier architecture already in place by Warfighter's Edge. The IT support scope is limited to the Warfighter's Edge development network, but help with other IITA agencies as duties permit is authorized when they do not interfere with Warfighter's Edge support.

1.5 Service Provider Responsibilities

1.5.1 Performance Category 1: Geospatial Services

None.

1.5.2 Performance Category 2: Software Development and Research

None.

1.5.3 Performance Category 3: Software Maintenance and Modification

TASK 1: Modify the WEdge Shuttle version 1.2 which requires interaction with the WEdge Repository for data transfer. Analyze system to determine the appropriate fixes and implement corrections. Issues are possibly isolated to the client Shuttle software but the fixes may require a refactor of the Repository (Tier 2) software.

1.5.3.1 Software Maintenance Tasks

For these tasks, formal deliverable items are required and defined in this PWS.

1.5.3.1.1 WEdge DR 2011-0041

Fix: Shuttle GUID blocks DAFIF Update GUI: As a route is opened that requires a DAFIF update, the dialog opens up behind the shuttle GUI

1.5.3.1.2 WEdge DR 2011-0042

Fix: Shuttle Filter MAJCOM/NAF/Base/Unit causes unhandled exception. Choosing a WEdge Master name and MAJCOM filter values other than "all" causes an error message to be displayed.

1.5.3.1.3 WEdge DR 2011-0044

Attempt to fix: Shuttle WEdgeMasterPolling service doesn't start or it stops on Tier 2. Periodically the Tier 2 (WEdge Master) polling service doesn't start. This may be a problem with the SQL service not starting properly on the Tier 2. This is an inconsistent error that cannot always be reproduced.

1.5.3.1.4 WEdge DR 2011-0045

Fix: Shuttle inconsistent display: Some of the buckets that should be displayed are not displayed. For example, four should be visible but only three are. A client polling service restart sometimes fixes this issue.

1.5.3.1.5 WEdge DR 2011-0046

Fix: Shuttle menu display doesn't always match highlighted bucket names. When a user creates a bucket, the bucket is initially highlighted as though it is selected for action. The mouseover tooltip reads information about a different bucket.

1.5.3.1.6 WEdge DR 2011-0047

Fix: Shuttle bucket permission not publishing correctly. During regression testing for Shuttle v1.2, it was discovered that when a bucket is created, permission do not always publicize properly. For example, the user may create a bucket on Tier2-A read permissions set for Tier2-C and the bucket may not show up on Tier2-C. This is an intermittent problem.

1.5.3.1.7 WEdge DR 2011-0048

Fix: Shuttle size limitations: During regression testing, it was discovered that there is a limitation on file sizes within the Shuttle and or a limitation on the bucket sizes. In testing 500MB bucket, shuttle would not publish nor update. The error needs to be handled gracefully and limit should only be due to resources available.

1.5.3.1.8 WEdge DR 2011-0049

Fix: Current shuttle behavior allows any user to change WEdge Master connection without inputting any credentials. Require the user to log into a Wedge Master with credentials such as username and password before connecting. Alter behavior to comply.

1.5.3.2 Period of Performance

Task 1 period of performance is dependent on the vendor proposal.

1.5.4 Performance Category 4: Information Technology Support

TASK 2: This task is to support the WEdge network including small computers and inventory. Formal deliverables are required and explained in this PWS

1.5.4.1 IT Support Tickets

Provide task tracking via "IT support tickets" found on the government SharePoint site at http://sp2010/SitePages/IT Service Request.aspx. Customer complaints will be received via written and recorded means. A complaint is validated when the COTR reviews the complaint, discusses with the submitting customer and is found to have a negative impact on productivity.

1.5.4.2 Small computer support

Keep PC based computers connected the network, running, with updated and current virus protection within 2 business days of new definitions available. Maintain computer compliance for the research network and ensure licenses are available for software to meet the needs of Warfighter's Edge. Ensure that no software is used without a license. Inform the government 90 days before any license expires.

1.5.4.3 Network Hardware Support

Maintain two full racks of equipment in the server room. Ensure anti-virus compliance with virus protection updated within 2 business days of new definitions available. Ensure TCNO guidance is completed within 2 business days of receipt and ensure IAVAs are completed within 1 week of receipt.

1.5.4.4 Network Software Support

Manage Exchange 2010, Domain controller/Active directory in a windows Server 2008 R2 environment, TFS 2008 (dormant) and 2010 (active), TFS build servers, SharePoint 2010, Backups, Fileserver, Microsoft Lync 2010, VPN Access, VM FARM with Hyper-V, Failover clustering and license servers. Keep these systems operational such that failures due to improper configurations do not happen more often than 1 hour per month.

1.5.4.5 Inventory

Maintain inventory control on all equipment in the ADPE inventory list assigned to Warfighter's Edge. Manage hand receipts to control the ADPE inventory. Maintain the software license inventory.

1.5.4.6 Period of Performance

The period of performance for this task is 1 year with three option years.

1.5.5 All Software Tasks

No changes.

1.5.5.1 Agile Programming Methodology

No other requirements exist for agile methods

1.5.5.2 Installer Code Writing

Modify the installer for the Shuttle Client, and WEdge Master as applicable. Install the client(s) with corrective changes.

1.5.5.3 Software Testing

Load test the system using as much data and simulated diverse locations as possible using VMs and test networks available at USAFA. Unit tests will be written around all tasks in this PWS and must exceed 80% of written code. Perform the following tests against written code and the test plan: Unit tests, functional testing, white box testing, regression testing, and security scans.

1.5.5.4 Software Security, Certification and Accreditation

For this effort an IA Plan is not required. IA compliance will be inherited.

1.5.5.4.1 DoD Information Assurance policies

No changes

1.5.5.4.2 Software Reviews and Scans

1.5.5.4.2.1 Code reviews

No changes.

1.5.5.4.2.2 Fortify Scans

Alternate scans versus HP Fortify are authorized. The government will provide up to 4 licenses for HP Fortify.

1.5.5.4.2.3 Software Vulnerability

Previously written code will be scanned and vulnerabilities will be mitigated at the level required IAW the BPA.

1.5.5.4.2.4 Standard Technical Implementation Guides (STIG) reviews

Application and database STIGs must be reviewed by each code writer for understanding before beginning work so that no category 1 vulnerabilities are found during the final certification process conducted by the WEdge PMO. Documented reviews of these STIGs within the last year are acceptable.

1.5.5.5 Software Development Qualifications

1.5.5.5.1 Certified Ethical Hacker or equivalent

CEH for this effort is not required.

1.5.5.6 Configuration Management

The version of the Shuttle will be 1.2 after fixes are in place and will be released. An order-specific CM plan is not required for this small development task, but code must be checked into the USAFA WEdge TFS system. This does not alleviate responsibility to utilize configuration management practices.

1.5.6 All Tasks

1.5.6.1 Interaction with IITA

Certification and accreditation personnel from the WEdge Program Management Office will work closely with the development of Shuttle software to ensure information assurance compliance.

1.5.6.2 Customer Interaction & Operational Support

None.

1.5.6.3 Project Management

The project manager will work with Lt Col Andy Berry as the primary IITA PM for this effort. Ms. Rhonda Maffeo is appointed as the PMO PM for the Shuttle. Coordinate with her for status updates of Shuttle DR work.

1.5.6.3.1 Program Management Plan

No changes

1.5.6.3.2 Metrics

No changes.

1.5.6.3.3 Integrated Digital Environment (IDE)

Meeting minutes, metrics and documentation will be posted in the IDE.

1.5.6.3.4 Meetings

No changes

1.5.6.3.5 Project Management Reviews (PMR), Status and Technical Design Meetings

PMRs will occur once every 2 weeks for the Shuttle work. No PMR is required for IT Support.

1.5.6.4 Restrictions on development of proprietary material

No changes.

1.5.6.5 Data Accession List

No changes.

1.5.6.6 Software Sustaining Support

No changes

1.5.6.7 Task Information

No changes

1.5.6.8 Security Requirements

No changes

1.5.6.9 Place of performance

No changes

1.5.6.10 Travel
Travel is not authorized for these tasks.

1.5.6.11 Service provider Purchases
Purchases are not authorized nor needed for these tasks.

1.6 Deliverables and Acceptance Criteria
Days are representative of work days, not calendar days unless otherwise dictated. All documentation should be compatible with the Windows 7 operating system and readable by Microsoft Products or in a .pdf format unless specifically required otherwise.

Provide a final CD/DVD with all final documentation, code, executable files and data.

D-1: Test Plan
- Due Date: Within 10 business days of award.
- Applies to: Task 1.
- Format: Electronic Microsoft product preferred - vendor choice, but must be editable. Include steps for each test so they are repeatable and provide traceability so each discrepancy is fully tested.
- Standard: Each requirement in section 1.5.3 is covered by a test.
- Performance Criteria: 100% of requirements are identified and accurately reported for traceability.
- Purpose: This will be used to pass on to 3rd party testing agencies and provide a way to reproduce a complete regression test.

D-2: Code Review Results.
- Due Date: By 5:00 PM on the last day of a code iteration cycle.
- Applies to: Task 1.
- Format: Editable Microsoft Word 2010 electronic format showing the results of peer code reviews describing the section of code reviewed and compliance with the WEdge coding standards.
- Standard: Code reviews are conducted to review written code during an iterative development cycle. Conducted in such a manner that code is reviewed for compliance with WEdge coding standards with an emphasis on logic design and possible coding defects.
- Performance Criteria: Code reviews are completed timely 80% of the time.
- Purpose: This is required for certification and accreditation.

D-3: Code Scans
- Due Date: By 5:00 PM on the last day of a code iteration cycle.
- Applies to: Task 1.
- Format: Automated output is authorized for delivery. Vendor choice but the deliverable must show the results of the scans meet the requirements of section 1.5.5.4.2.3 of the BPA.
- Standard: Scans will cover 100% of all code written in support of this PWS.

Performance Criteria: Zero high and zero critical substantiated vulnerabilities are identified. For false positive results, 100% are explained in detail why the identified area is a false positive.
Purpose: Required for certification and accreditation

D-4: Vendor Network Compliance.
Note: N/A if using WEdge DREN network (government provided network at USAFA).
Due Date: Before performing work on a vendor's network.
Applies to: Task 1.
Format: Certificate to operate (CTO) or equivalent issued by a DoD agency.
Standard: Process to maintain compliance with IA controls that cover the certificate to operate.
Performance Criteria: Zero category 1 vulnerabilities
Purpose: Required to show that an external network will not produce vulnerabilities into the system

D-5: Metrics.
Due Date: By 5:00 PM at the end of each code iteration cycle and updated at each PMR.
Applies to: Task 1 and Task 2.
Format: Provide burndown charts, schedule status, and developer velocity at a minimum for Task 1. Task 2: Charts or graphics depicting network status, network topology, inventory, and status of work items from IT service requests.
Standard: Metrics shall describe current status in the context of historical progress with projections of future performance.
Performance Criteria: Reflect the current state and status accurately at least 80% of the time. IT support tickets completed before desired date at least 85% of the time with no more than one substantiated customer complaint a quarter.
Purpose: Transparency to the government and status of the overall plan.

D-6: IDE Plan.
Due Date: Within 30 calendar days of call order award.
Applies to: Task 1 and Task 2.
Format: Microsoft Word 2010 preferred showing compliance with the requirements of section 1.5.6.3.3 in the PWS. If using the Government provided SharePoint site, this is not required.
Standard: Company process depicting structure and requirements on maintaining the overall digital environment.
Performance Criteria: Detailed instructions how the government will gain access are covered as well as a compliance with storing all documents. Delivered on time.
Purpose: Transparency with the government and ease of getting deliverables.

D-7: Program Management Review

Due Date: First Wednesday of each Month at 10:00 AM. Although the BPA requires a PMR every two weeks, for these tasks, the PMR is not required more often than once a month.
Applies to: Task 1 and Task 2.
Format: PowerPoint slide deck covering present current program cost, schedule, technical and risk statuses. Include metrics and updated schedules. Meeting minutes posted by COB Thursday after the PMR and sent via email.
Standard: Each task is covered showing current status with issues emphasized and details of risk mitigation on those issues.
Performance Criteria: Slides are received 24 hours in advance at least 80% of the time. Meeting minutes are posted by 5:00 PM the day after the PMR and sent out via email at least 80% of the time.
Purpose: Status for the government and records.

D-8: Status Meeting.
Due Date: Every Wednesday 10:00 AM.
Applies to: Task 1 and Task 2.
Format: Provide a meeting outline, slides are optional. Meeting will cover items and issues that have changed since last status meeting. This should take no longer than 30 minutes and may be cancelled if no changes exist.
Standard: Each task is covered showing current status with issues emphasized and details of risk mitigation on those issues.
Performance Criteria: Outline received 24 hours in advance at least 80% of the time. Meeting minutes are posted by 5:00 PM the day after the status meeting and sent out via email at least 80% of the time.
Purpose: Government records

D-9: Technical Software Design Document and Reviews.
Due Date: By code completion.
Applies to: Task 1.
Format: Microsoft word 2010 preferred. Depict content in a format similar to the IEEE standard for an SDD. Details should be at a technical level showing code and designs that should not go deeper than the class level unless necessary for understanding.
Standard: Technical paper showing code and designs to a depth of the class level or deeper if necessary for understanding. Processes are in place to update and maintain the SDD during code iterations.
Performance Criteria: Designs are detailed to a level of depth where the overall design and architecture are understood by another developer. Each requirement of this PWS is covered in the SDD and at least 80% of all code written under this PWS is covered by the SDD.
Purpose: To provide validation of understanding by both coders and the government.

D-10: Project Plan.
Due Date: Updated plan by 5:00 PM the beginning day of a code writing iteration
Applies to: Task 1.

Format: Microsoft Project preferred or equivalent format showing the overall schedule.
Standard: In the plan, the current iteration will be depicted at the PBI level (or equivalent). The previous iteration will show updated status at the PBI level (or equivalent). Future iterations will provide feature level details.
Performance Criteria: Current iteration covers 100% of PBIs (or equivalent) and for the previous cycle all PBIs are updated accurately at least 80% of the time.
Purpose: provides a baseline for metrics.

D-11: Full Capabilities Briefing.
Due Date: At code completion.
Applies to: Task 1.
Format: Software demonstration showing compliance with each requirement of this PWS. Also show exploratory use of the software via common use scenarios.
Standard: The software remains stable and each requirement is demonstrated.
Performance Criteria: No more than one unhandled exception. Zero crashes during the demonstration and exploratory use.
Purpose: To provide a demonstration to the government for accepting the software.

D-12: Software Requirements Specification (SRS)
Due Date: Within 30 calendar days of award and updated iteratively by 5:00 PM at the end of an iterative cycle.
Applies to: Task 1.
Format: Modify the SRS of the current system to include updates to the system.
Standard: IEEE standard or equivalent is followed for an SRS. The SRS is updated showing work accomplished during the iterative cycle. Final product covers all requirements.
Performance Criteria: 100% of all requirements are covered in the document. SRS is updated on time at least 80% of the time.
Purpose: To provide a baseline understanding of the overall system.

D-13: Requirements Traceability Matrix (RTM)
Due Date: Updated at the end of each software development iteration by 5:00 PM and finalized by code completion.
Applies to: Task 1.
Format: Show each requirement, relation to the SRS, relation to the SDD, code section meeting the requirement, relation to the test plan, comments as necessary.
Standard: The RTM covers 100% of the requirements of this PWS.
Performance Criteria: At least 80% of the time the RTM is updated on time with accurate updates.
Purpose: For validation of requirements to other deliverables.

D-14: Software Version Description (SVD)
Due Date: Finalized by code completion.
Applies to: Task 1.
Format: Comply with the attached SVD format. This follows DI-IPSC-81442A.

Standard: The SVD is filled out/updated and complies with the requirements of the document as depicted.
Performance Criteria: SVD covers all installed items of the software.
Purpose: Required for certification and accreditation.

1.6.1 Inspection

All deliverables will be reviewed and inspected IAW government's QASP from this PWS. Quality Assurance Evaluations are accomplished by a Contracting Officer's Representative (COR) at a frequency identified in the QASP. These reviews are written up and approved by the contracting officer within 3 weeks of finalization. Any noted deficiencies and discrepancies will be brought to the Contractor's attention. The contactor may be subject to re-inspection charges associated with corrective action.

2 GOVERNMENT FURNISHED PROPERTY AND SERVICES

2.1 General Information

No changes

2.2 Government furnished equipment

No changes.

2.3 Government furnished software

The government will provide a TFS license and HP Fortify license for up to 4 individuals.

IITA

INSTITUTE FOR INFORMATION TECHNOLOGY APPLICATIONS

US AIR FORCE ACADEMY

WEdge Configuration Management Plan

3 APRIL 2012

DOCUMENT VERSION CONTROL: 1.1

Revision History

Revision Information				Coordination Dates	
No.	Description	Revised by	Date	Director	WEdge IAM
1.0	New Document based on change of contract and creation of WEdge Program Management Office	R. Filer	1 Nov 2011	30 Nov 2011	10 Nov 2011
1.1	Added language from DoDI 8500.2 IA Control Controls and Application Security and Development Security Technical Implementation Guide	Lt Col Berry, R. Filer, D. Schutzius, R. Maffeo	3 Apr 2012	3 Apr 2012	3 Apr 2012

Table of Contents

1 Introduction

The objective of Configuration Management (CM) is to assure that a product performs as intended and its configuration is adequately identified and documented to a level of detail sufficient to meet anticipated needs of the user. Configuration Management ensures unauthorized, arbitrary changes or updates to the information system or software baselines which could negatively impact the system or the software's integrity and availability do not occur. The intent of this plan is to ensure that configurations are identified and managed such that the Warfighter's Edge (WEdge) Program Management Office (PMO) can control change to most effectively meet the user's need and approves any changes to the baseline. This document describes the CM activities to be performed in support of the WEdge program. This management plan applies to all items overseen by the PMO, whether it is developed internally or via a contracted company.

1.1 Purpose

This Configuration Management Plan (CMP), required by IA control DCCB-1 (reference DODI 8500.2), provides information on the requirements and procedures necessary for system/network and software configuration management activities of the WEdge Program. This CMP identifies the software, hardware, and documentation requirements for the WEdge Development Network (WEdgeDEVNET) and software configuration management. It establishes the methodology to generate configuration identifiers, and perform assessments and reviews during requirements analysis, design, development, and maintenance of the Software Configuration Items (SCI). It establishes a verification process to ensure effective configuration management processes.

1.2 Scope

This CMP applies to the entire WEdge team, both PMO and contracted project teams. It covers all software development, and may specify certain aspects of the hardware used to develop the products. It includes the WEdgeDEVNET, a subnet of the United States Air Force Academy (USAFA) ResearchNet. If any WEdge project has specific requirements not covered or as an exception to this CMP, the project will add a "project Appendix" as an attachment to this main document and an exception to policy may be brought to the CCB.

Any requirements identified in this document that adversely affects an individual or group's ability to meet productivity or time goals should be brought to the attention of the WEdge Program Manager (PM) for consideration of possible waiver or exception to policy.

This document is under version control, but may be modified as needs of the team evolve. The most recent copy of this document will be posted in the Institute for Information Technology Applications (IITA) SharePoint site under common shared documents at http://sp2010/Shared%20Documents/Forms/AllItems.aspx.

1.4 References

Title	Revision	Date
Information Assurance (IA) Implementation DoDI 8500.2		6 Feb 2003
Air Force Certification and Accreditation Program AFI 33-210		23 Dec 2008
Application Security and Development Security Technical Implementation Guide (STIG)	V3 R4	28 Oct 2011
WEdge Software Development Process	V2.0.2	1 Nov 2011
WEdge Configuration Control Board Appointment Memorandum	n/a	2 Apr 2012
Software Version Description DID #DI-IPSC-81442	Version A	11 Jan 2000

2 Configuration Management

Configuration management is the systematic evaluation, coordination, approval or disapproval, and implementation of all proposed changes in the configuration of a software configuration item (SCI) after formal establishment of its baseline. Procedures must be established to ensure that changes are accomplished in an organized manner with traceability and accountability so that project CM requirements are properly implemented. Requested changes to software, hardware, data, networks, or documentation are formally reviewed and approved in order to allow evaluation of the effect of the change on security, performance, interfaces, acceptability, completeness, and documentation.

2.1 Organization

Warfighter's Edge (WEdge) is a software development team located at the USAF Academy. Its organization has two elements; a Program Management Office (PMO) and project teams. The PMO is led by a USAF officer (WEdge Program Manager). All long term CM issues are managed by the PMO, with project or product specific CM managed in cooperation with the contract company.

WEdge maintains a standing body to direct configuration management. Designated the Configuration Control Board, or CCB, the members are selected by the WEdge Program Manager from the Program Management Office and contracting teams; notified via a memorandum for record.

Individual CCB members may have responsibilities for providing items to the CCB for review. Others will be invited to the CCB acceptance meeting to provide additional materials, clarifications or comments. A meeting of the CCB is considered a public event and is open for anyone to attend.

The CCB is a program level (project-tailored), decision-making body that must approve or disapprove all change requests before they can be implemented. The CCB acts on those changes that would cause material or substantive changes to the system, including security or information assurance considerations, design specifications, budget (including lifecycle cost projections), the project schedule, and interface characteristics with other systems.

2.2 Responsibilities

2.2.1 Configuration Control Board

The primary responsibility of the CCB is to validate and approve all proposed and completed changes to current baseline hardware and software. Additional responsibilities of the CCB include ensuring necessary supporting SCI are completed to standards prior to the software moving to the next stage of its life cycle.

The WEdge CCB conducts scheduled meetings to perform the following functions: System or network baselines, Software Change Approval and Prioritization; Sprint 0 Delivery; and Software Project Delivery.

2.2.2 Configuration Control Board Chair

The WEdge Program Manager (PM) acts as the Chair of the CCB. The PM is the final authority for all CM issues.

The CCB Chair appoints the other members of the CCB by memorandum.

2.2.3 Membership and Voting

The CCB consists of both voting and non-voting members. Membership should consist as a minimum the CCB Chair, the IAM/or IAO, the CCB Secretary, the WEdge PMO Project Manager for the project being reviewed and at least one representative of the project or system being reviewed, preferably the Lead Developer. Voting Members as a minimum should consist of the CCB Chair, the IAM/IAO and the WEdge PMO Project Manager. All members shall be identified in writing updated at least annually and their duties outlined by title, position and system. The CCB Secretary will record all voting results (approvals, denials, and deferrals), waivers, policy exceptions, baselines, test results and CCB attendance as a minimum. The CCB Secretary will post minutes within a reasonable timeframe of a scheduled CCB. Voting will be by simple majority unless the CCB Chair directs otherwise.

2.2.4 Software Change Approval and Prioritization

All requests for software changes including patches, upgrades and current code deficiencies, no matter the size of the effort, need to be investigated, validated, prioritized and funded. It is explicitly forbidden to implement changes to certified WEdge software products without prior CCB authorization. It is also expressly forbidden to make any changes to source code libraries or system libraries under CCB management without CCB authorization.

Requests for modifications to the baseline software must be submitted in writing via email to any CCB member, or posting to the SharePoint site. The WEdge PMO Project Manager(s) will oversee all requests are input into the site and that they are brought for review at each CCB meeting.

Requests for modification may be submitted as a security patch, a defect to current code, enhancement to current code baseline, or new feature adding capabilities. Each of these requests will be analyzed for applicability, feasibility, criticality, level of effort required, impact on other baselines, information assurance and funding during the CCB prioritization part of the meeting. An assignment of priority will be given to each request (or sub item) as an outcome of this analysis.

Requests that are identified as mission critical will be analyzed within 24 hours of reporting (for example, CYBERCOM issuing a patch via an Information Assurance Vulnerability Alert (IAVA) requiring implementation within an extremely short time frame). All other new requests will be presented for consideration during the planned weekly PMO meeting. A rollup summary will be sent from the WEdge Configuration Manager to the PMO members 24 hours prior to the weekly meeting for review. Major development efforts, including significant new features should be presented to the CCB via a unique briefing with requirements broken down to a fairly detailed level.

WEdge develops software using agile methodology. Deficiencies discovered within the code during a development cycle (sprint, iteration, or similar) should be fixed during that development cycle if at all possible. Otherwise, the deficiency should be fixed immediately in the next development cycle. All unfinished defects shall be referred to the CCB for prioritization.

2.2.5 Software Project Acceptance

When a development team determines that their project (including all supporting items) is complete, they will submit the deliverables to the PMO for acceptance. The PMO and any other CCB members will have a minimum of one calendar week to review the items for compliance and acceptance. It is up to the CCB to ensure all requirements have been met and the configuration change captured before project acceptance. Project acceptance will be documented fully IAW the CCB memorandum.

2.3 Policies, Directives, and Procedures

All noted code changes, whether deficiencies or customer requirements will be tracked via a single system. This system provides the ability to prioritize and move items into development status once funding and contracts have been established.

The WEdge CCB will convene on a monthly basis to review SCIs. This meeting will be the third Thursday of the month and will convene at 10:00 AM for two hours. The agenda for the CCB is fluid and should cover the following at a minimum.

1. Attendance
2. Each Product Status
    a. Customer reach
    b. Customer satisfaction
    c. Defect Review
3. Hardware & Network status
    a. Issues
    b. Changes
4. New Product
    a. Strategic Product Plans
    b. Product Prioritization from PMO List
5. Acceptance
    a. Acceptance Checklist
6. Vote
7. Adjournment

2.3.1 Classification Marking and Labeling

The Release Manager will identify the objects requiring security classification labels.

2.3.2 Compliance Testing

Compliance testing provides a reasonable level of assurance that system changes will achieve expected results. Prior to delivering any operational software to the USAF, to include upgrades, the software must undergo compliance testing. Compliance testing verifies modifications to the baseline software are not negatively impacted by the introduction of patches, upgrades or planned modifications. Test results will be presented to the CCB as part of the security documentation prior to deployment. For systems and networks, WEdge is using the current AF approved anti-virus, Eye-Retina products and DISA Gold Disk for STIG compliance. For software products, WEdge is using the same suite of test tools as AFNIC

which is mkruntest, and Fortify products. WEdge may use other products as they become available. All test results will be submitted to the CCB.

2.3.2.1 Security Patches

As part of its Vulnerability Management Program, the WEdge IA office subscribes to the CYBERCOM IAVAs. IAVAs are reviewed for applicability by the IA office and a lead developer. If a security patch is required for an existing certified software product already on the AF E/APL, the product's lead developer or owner will identify an individual to test the patch on a non-production test bed. If there is no negative impact to the product, the patch may be included in the next minor version release as authorized by the CCB. The WEdge Government PM will determine if maintenance funds or resources are available to include the patch. If the patch has a time compliance mandate, the WEdge Government PM will determine if an emergency CCB is required and convene one if necessary.

2.3.3 Waivers and Exceptions to Policy

The CCB is the governing body to waive or issue exceptions to policy within its purview. The WEdgeDEVNET, for example, may require certain exceptions or waivers be submitted to the USAFA Configuration Authorization Board (USAFA CAB) per USAFA Instructions (e.g., screen locks) while other items may be approved and waived by the WEdge CCB (e.g., storage of recovery media). The CCB Secretary will ensure all waivers and exceptions to policy are retained and filed appropriately. The following items have specific DoD policies already established and if the policy impacts the development of WEdge products or WEdge operations, a waiver or an exception to policy may be submitted to the CCB for consideration: storage of recovery media; disaster planning; data in transit (sensitive but unclassified) flowing across commercial networks not encrypted using NIST-certified cryptography; markings and labels reflecting classification or sensitivity level IAW DoD 5200.1R; virus protection; warning banners; emergency lighting and emergency exit routes; smoke detectors; handheld fire extinguisher or fixed fire hoses; access to facilities processing sensitive or unclassified information; screen locks; and installation of temperature controls and alarms.

2.4 Process Management

The WEdge Configuration Management process is maintained and controlled by the WEdge Release Manager IAW Application Development and Security STIG. The Release Manger is a role performed by a member of the WEdge PMO. The WEdge Release Manager is also responsible for establishing the CCB, ensuring that the IAM is a member and ensuring that the CCB meets at least every release cycle or more often. Because of these duties, it would be a conflict of interest to have a member of a contracted development team serve as the Release Manager.

2.4.1 Requirements Process

WEdge may receive requirements or recommendations for baseline changes in the form of funded formal requirements, unfunded requirements (e.g., security patches mandated by USCYBERCOM), bug fixes, or user requests. Modifications may also be necessitated by changes to other SCIs or dependencies. Each requirement is analyzed by the PMO and presented to the CCB for consideration. Requirements will be assigned a priority and developed as resources permit.

2.4.2 Prototype Process

The WEdge Prototype Process is a micro development process with the intent of producing software prototypes, refined requirements, and greater fidelity of total work required. It is a process that may be conducted inside of the PMO and does not directly affect the configuration. The CCB will review, approve and record the prototype deliverables.

2.4.3 Main Development Process

A software development project may be performed by one of several groups: organically by the PMO development team; in-house via a team of contractors; or contracted externally to a specific contract company. The output of CCB change approval will serve as the inputs to main development work as directed by the WEdge Government PM. The decision on whether to perform the work internally or externally will be based on funding, schedule, scope of the work, throughput capacity and expertise.

The PMO will provide a project manager to monitor the main development effort and bring to the attention of the CCB any items which need discussion and resolution prior to the end of the development effort. The nature of Agile development is such that it will be common for slight modifications to the requirements, and therefore changes to the configuration change plan, to happen during the development effort. All adjustments to the original CCB approval should be documented and reapproved during the monthly meeting.

2.4.4 Software Acceptance and Release Process

Once a software development project is deemed feature complete, depending on the terms of the contract, it may be made available to a test agency if not tested in house. Pending results of the software test and available resources to rectify outstanding issues, a CCB will convene to consider approval of product release. All deliverables will be reviewed and a decision will be made and documented.

Based on the agency sponsoring the project and the need to provide outside certification and accreditation, the project (software and appropriate documentation) will be delivered to the sponsor or made available to direct WEdge users.

2.4.5 Post Release Support Process

Support will be unique to the software product. Certain products will be adopted by other agencies and help will be provided directly from that agency. Other products will be supported directly by WEdge.

2.4.6 Software Maintenance Process

As security patches, deficiencies or defects to products are discovered in a fielded product, the defect should be analyzed and presented to the CCB per paragraph 2.2.4.

3 Activities

3.1 Configuration Identification

WEdge relies on several software, hardware, and documentation products to maintain CM. Most projects use or produce the same set of items, but individual projects may need additional products. Those project unique CM items should be identified by the CCB or in the contract Performance Work Statement.

3.1.1 Configuration Identification

Items under CM include hardware, software, and documentation.

Hardware used to support WEdge development is not a significant CM issue from a software development perspective; however certification and accreditation of the WEdgeDEVNET does require the hardware to be securely configured and managed. The WEdge CCB will review and approve the WEdgeDEVNET baseline to include the hardware and software and any regular updates to their baselines. A current and comprehensive baseline inventory of all hardware (to include manufacturer, type, model, physical location and network topology or architecture) required to support enclave operations is maintained by the CCB. The hardware baseline shall be validated not less than annually. WEdge developed products normally run on Microsoft (MS) Windows and Server operating systems (OS), and all development tools run on a MS based OS.

Software used on the development network will be identified and inventoried as part of the WEdgeDEVNET certification and accreditation package as well as the software product certification effort. All mobile code used within the WEdge products must be identified and approved by the CCB. All public domain software used within WEdge products must be identified and approved by the CCB. The CCB shall ensure freeware or shareware applications are distributed and used as directed. These products shall be assessed for information assurance impacts, and approved for use by the Designated Approving Authority (DAA) (for software being delivered/deployed to the USAF, the DAA will be within the current USAF software certification process.) A list of ports, protocols, and services shall be documented and regularly updated and maintained through the CCB. The WEdgeDEVNET certification and accreditation documentation requires a baseline inventory of all the software on the network, including vendor, version, DOD license, name and location of the hosting system. The software inventory shall be maintained by the CCB. Any changes to the baseline must be reviewed and approved by the CCB.

3.1.2 Configuration Naming

WEdge projects will be given a unique name to distinguish the effort or contract from other WEdge projects. This naming convention may have nothing to do with the official product name and version number.

WEdge developed products will use a sequential based numbering system with four numbers separated by periods. The numbers will represent versioning and be in the format [major.minor.maintenance.build] where major means at least a 50% re-write of the software, minor

means a feature addition, change or deficiency fixes, maintenance means minor deficiency repairs or service pack, and build the daily or more often increment of each compiled build. The final versioning is determined by the CCB and will be stated before work begins.

All documentation materials will incorporate the product version number using major.minor.maintenance. Use of the build will be displayed on about boxes in the software code and referenced on all engineering releases as well as the version number that gets installed in the registry.

3.1.3 Acquiring Software Configuration Items

All WEdge developed software will be maintained within the MS Team Foundation Server in IITA and will be backed up weekly with backups stored off-site from the TFS. The WEdge Configuration Manager will be responsible for creating and maintaining workspaces for each product or project, as well as granting appropriate permissions to personnel working on or overseeing the project.

Once software has been built, if the project requires, it will be packaged along with necessary files into an installer. Once the software has been tested and certified it will be stored and distributed by the government as appropriate. The typical mechanism is to maintain an installable version on an internal WEdge server as well as distribute the software via electronic or physical media (e.g. CD/DVD). All physical media will be appropriately marked with classification, distribution caveats, product name, version, and date of release with the words “US Government Only” clearly displayed unless dictated otherwise. The use of a standard WEdge template available from the PMO is encouraged.

3.2 Configuration Control

Configuration of WEdge software is handled at two levels, referred to here as Strategic/Operational and Tactical. Strategic/Operational control means controlling the baseline at the feature and architectural level, whereas Tactical refers to controls at the code level. Information assurance controls and security patches may be either Strategic/Operational or Tactical.

3.2.1 Requesting Changes

Strategic/Operational change requests follow a formal process identified in paragraph 2.2.1

Tactical changes are made by the developer following WEdge code development guidelines and in consultation with the project manager, the PMO architect and CM.

3.2.2 Evaluating Changes and IA Impact Assessment

Changes to the WEdgeDEVNET or certified WEdge software products in production require an IA impact assessment prior to implementation or deployment. The IAM/IAO will work with the WEdge System Administrator, lead developer and/or Release Manager to assess system or software changes. If there is no negative impact to the security baseline of either the WEdgeDEVNET or the software product, the IAM/IAO will issue a No Security Impact Memo and it must be presented to the CCB for recording. If there are negative impacts to the security baseline of the WEdgeDEVNET, the changes may necessitate a recertification/reaccreditation activity and the local DAA notified. A Plan of Action and Milestones may be required to be developed for the WEdge Government PM. If there is a negative impact to the

software product's baseline, the IAM/IAO will work with the development team to correct or mitigate the vulnerabilities.

Strategic/Operational changes are evaluated periodically by the CCB and take into consideration program direction, PM strategic guidance, funding, availability of resources, and impact to the baseline.

Tactical changes (minor code maintenance) are evaluated by the project team in coordination with the PMO architect, IAM/IAO and CM.

3.2.3 Approving or Disapproving Changes

The WEdge Government PM is the decision authority for approving or disapproving changes to the WEdge overall program, project direction, funding and resources whereas the CCB is the decision authority for changes to the systems and software product baselines produced by WEdge. The WEdge Government PM is the WEdge CCB Chairman.

3.2.4 Implementing Changes

Changes will be made at the direction of the government. This may come in the form of a contract, task order, or modified contract, if the work is to be awarded to an outside developer. The tasking may come in the form of an e-mail or written document if the work is to be accomplished within the PMO. Details of the change, including requirements and versioning information, will be incorporated.

Tactical changes that involve code written during an ongoing project should be implemented as part of the ongoing version.

3.3 Configuration Status Accounting

Team Foundation Server (TFS), as well as an associated SharePoint site, will be used for each software development product and project within WEdge. TFS will be administered by the WEdge CM. Each project will have controlled access limited to designated project members and the PMO. Application programmer privileges to change production code and data are limited and are periodically reviewed. The WEdge CM along with the lead developer or Release Manager will identify the application programmers authorized to change production code as well as the files/data sets that contain production code and present it to the CCB. Periodically, the CCB shall review the total number of application programmers authorized to make production code changes. System libraries and source code libraries are managed and maintained to protect privileged programs and to prevent or minimize the introduction of unauthorized code. Without appropriate library management controls, unauthorized code can intentionally or inadvertently be added. The libraries shall be controlled by the CCB. All changes to privileged programs require CCB approval prior to implementation.

The following metrics will collected. They will be reported to the PMO at the periodicity and by the organization indicated.

Metric	Reported by	How often
Project Burn Down	Project Development Lead	Not To Exceed Monthly
Sprint Burn Down	Project Development Lead	Not To Exceed Biweekly

3.4 Configuration Evaluation and Reviews

The WEdge CCB is the mechanism to review and evaluate software that has been developed. The CCB will meet prior to the submission of the software to AFNIC for certification (if required) or release for use. The CCB will review the contract deliverables supporting certification and accreditation ensuring the project is complete. With regard to CM, the CCB will verify that the new requirements have been met and that the baseline capabilities are maintained (unless superseded by a new requirement).

The CCB will be comprised of members of the PMO or part of IITA as designated in writing by the WEdge Government PM. The members will have specific tasks as laid out in the appointment letter.

During the CCB review process, all discovered or presumed discrepancies will be brought up for discussion with the CCB members. Items determined to be minor will be required to be fixed within five working days, but can be approved by the designated PMO representative. Items that are determined to be major will returned to the project team for rework and a new CCB will be scheduled. The WEdge Government PM, as leader of the CCB, has the authority to accept a project as complete.

3.5 Interface Control

WEdge products are developed to work within a Microsoft Windows environment. WEdge software's minimum hardware requirements are less than or equivalent to the operating system's hardware requirements unless clearly described otherwise. There are no hardware interface requirements.

Wedge products work within and interface with other software products. The WEdge PMO, particularly the CM and the architect, will stay apprised of changing industry and government standards. When these changes could potentially affect the development, standards or interfaces with other products, the CCB will review and submit recommendations or change requests to the WEdge Government PM.

3.6 Subcontractor/Vendor Control

All WEdge development will be performed using Microsoft Visual Studio and code will be kept in the WEdge Team Foundation Server in IITA. Each product will have one or more projects within TFS. If two or more projects are working on code of the same product, the CM will create a separate branch for each project. Each contractor will be responsible for merging their own code and conducting builds in the TFS environment.

The WEdge CM or PMO Project Manager will be responsible for ensuring that contracted code meets WEdge standards for style, format, and quality.

The contractor will be responsible for functional as well as security testing and documenting their individual code, and ensuring it meets the WEdge standards. Further testing and documentation review may happen either within the WEdge PMO or at an external test agency. The contractor will be responsible for correcting deficiencies found prior to acceptance by the government or as dictated in the contract. All deliverables will be government owned as well as be copyright and royalty free in accordance with applicable laws and regulations.

3.7 Release Management and Delivery

Once the WEdge Government PM and CCB have accepted the project deliverables, WEdge may take any of three paths for software release. 1) If the software needs Air Force level certification, WEdge will forward the certification package to the Air Force Network Integration Center (AFNIC). Once the package has gained AFNIC software certification, the software will be listed on the Air Force Evaluated/Approved Product List (E/APL). 2) If the product is already certified, and it is a minor version release, the WEdge Government PM may authorize release of the software if an IA assessment shows no negative impact to the certified baseline. The IAM/IAO must issue a signed No Security Impact Memo. Notice to AFNIC that a new version is available that doesn't violate the certification is required. 3) If the product is to be included in another baseline, the software may be forwarded to that office for testing, integration, and certification.

The WEdge Government PM will authorize distribution of software that has been certified and placed on the E/APL.

A release version of the installable software and accompanying documents will be burned to disc and stored separate from the development location. Also included in the offsite storage is the complete source code for that release. Labeling in TFS is not sufficient for this requirement.

The WEdge network will store all source code and deliverables on the "Z: drive" at \\10.215.1.5\CM_Archive where only the WEdge Government PM and Project Managers have access.

All releasable products are stored on the "R: drive" at \\10.215.1.5\Release where each product will have all customer releasable items including the installer, documentation and CD data. Everyone can access the R: drive but only the WEdge Government PM and PMO Project Managers have modification and delete capabilities.

4 Schedules

The Configuration Control Board will meet at regular intervals, as described in paragraph 2.3, to support the WEdge program, and will meet as needed to support a given project.

The CCB will meet as necessary after the weekly PMO meeting to discuss any new requirements or deficiencies since the last meeting.

The CCB will meet once a month, or as called by the WEdge Government PM, to discuss all change requirements to include IAVAs and security patches as well as deficiencies and to ensure they have been examined, clarified, and given an estimate of priority and effort.

The CCB will meet at the end of a project to ensure the deliverables have been provided; an IA assessment performed and meets standards. If the project passes the CCB scrutiny it will be accepted as complete and forward as appropriate.

5 Resources

Wedge will use a Software Version Description Document (VDD) (DI-IPSC-81442A) to capture and record a configuration baseline. The VDD is the primary configuration control document used to track and control versions of software being released to testing, implementation, or the final operational environment. The VDD provides a summary of the features and contents for a specific software build or release, and facilitates product implementation, testing, operations and maintenance.

The VDD identifies and describes the version of the SCIs that comprise the software build or release, including all changes to the SCIs since the last VDD was issued, as well as installation and operating information unique to the version described.

A VDD is required for each new or modified version of software that is released to the test, implementation, or operational environments, whether new development or maintenance. As a result, several VDDs may be produced during the life cycle of a project. Following a minor release of software to the target environment, the VDD should be archived as a project record and a new VDD created for the next delivery.

WEdge uses two databases to capture and track proposed and approved changes to the baseline software. Any person or organization may submit a change request or deficiency report via email to WEdgeHelp@WEdge.hpc.mil or DR in the Mission Planning Enterprise Deficiency Reporting System (Public Key Infrastructure protected), both of which will flow to the Internal WEdge SharePoint DR database. This database is administered by the PMO, with the output being items intended for discussion amongst the CCB for inclusion in future software baselines. Once items have been accepted as a baseline change by the CCB, they will be put into and tracked in TFS. TFS line items will have traceability to the change database. TFS will be administered by the PMO with project access by the Scrum team involved in the development.

6 Plan Maintenance

The WEdge Configuration Management Plan (CMP) is written to support the program concept of operations as modified in Fiscal Year 2012. As the concept for development within WEdge is Agile, the supporting policies, procedures, and documentation must also be agile enough to sustain the program.

The WEdge configuration manager is the person responsible for the CMP. They will maintain the official version of the document. They will be the coordinator for changes to the document.

The CMP will be reviewed at least semi-annually to ensure the document correctly reflects the WEdge process and to reinforce that the WEdge process follows the written guidance.

The WEdge Government PM is the final authority for changes to this document. Whenever changes are approved and published, the revised version will be delivered to all members of the WEdge team.

7 Definitions / Key Terms

AFNIC - Air Force Network Integration Center
CCB – Configuration Control Board
CD – Compact Disc
CM – Configuration Management/Manager
CMP – Configuration Management Plan
DAA – Designated Approving Authority
DVD – Digital Versatile Disc
E/APL – Evaluated/Approved Product List
IA – Information Assurance
IAM/IAO – Information Assurance Manager/Information Assurance Officer
IAVA – Information Assurance Vulnerability Alert
IITA – Institute for Information Technology Applications
MS – Microsoft
NIPRNet – Non-Secure Internet Protocol Router Network
NSI – No Security Impact
OS – Operating System
PKI – Public Key Infrastructure
PMO – Program Management Office
PM – Program Manager
POA&M –Plan of Action and Milestones
RM – Release Manager
SCI –Software Configuration Item
STIG – Security Technical Implementation Guide
TFS – Microsoft Team Foundation Server
USAF – United States Air Force
USAFA – United States Air Force Academy
VDD – Version Description Document
WEdge – Warfighter's Edge
WEdgeDEVNET - WEdge Development Network

Warfighter's Edge

WEdge Shuttle Version 1.2

Software Version Description

_____	_____
Contractor Project Manager	**Date**
_____	_____
Warfighter's Edge PMO Project Manager	**Date**
_____	_____
Warfighter's Edge Director	**Date**

REVISION HISTORY

Revision Information				Coordination Dates	
No.	Description	Revised by	Date	WEdge	Contractor
1.0	Original				

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Software Version Description (SVD)

The Software Version Description (SVD) identifies and describes the software version of the **WEdge Shuttle version 1.2.0.** It is used to release, track, and control software versions.

1. Scope.

1.1 Identification.

This paragraph shall contain a full identification of the system and the software to which this document applies, including, as applicable, identification number(s), title(s), abbreviation(s), version number(s), and release number(s). It shall also identify the intended recipients of the SVD to the extent that this identification affects the contents of the software released (for example, source code may not be released to all recipients.)

1.2 System overview.

This paragraph shall briefly state the purpose of the system and the software to which this document applies. It shall describe the general nature of the system and software; summarize the history of system development, operation, and maintenance; identify the project sponsor, acquirer, user, developer, and support agencies; identify current and planned operating sites; and list other relevant documents.

1.3 Document overview.

This paragraph shall summarize the purpose and contents of this document and shall describe any security or privacy considerations associated with its use.

2. Referenced documents.

This section shall list the number, title, revision, and date of all documents referenced in this document. This section shall also identify the source for all documents not available through normal State stocking activities.

3. Version description.

3.1 Inventory of materials released.

This paragraph shall list by identifying numbers, titles, abbreviations, dates, version numbers, and release numbers, as applicable, all physical media (for example, listings, tapes, disks) and associated documentation that make up the software version being released. It shall include applicable security and privacy considerations for these items, safeguards for handling them, such as concerns for static and magnetic fields, and instructions and restrictions regarding duplication and license provisions.

3.2 Inventory of software contents.

This paragraph shall list by identifying numbers, titles, abbreviations, dates, version numbers, and release numbers, as applicable, all computer files that make up the software

version being released. Any applicable security and privacy considerations shall be included.

3.3 Changes installed.

This paragraph shall contain a list of all changes incorporated into the software version since the previous version. This paragraph shall identify, as applicable, the problem reports, change proposals, and change notices associated with each change and the effects, if any, of each change on system operation and on interfaces with other hardware and software. This paragraph does not apply to the initial software version.

3.4 Adaptation data.

This paragraph shall identify or reference all unique-to-site data contained in the software version. For software versions after the first, this paragraph shall describe changes made to the adaptation data.

3.5 Related documents.

This paragraph shall list by identifying numbers, titles, abbreviations, dates, version numbers, and release numbers, as applicable, all documents pertinent to the software version being released but not included in the release.

3.6 Installation instructions.

This paragraph shall provide or reference the following information, as applicable:

a. Instructions for installing the software version
b. Identification of other changes that have to be installed for this version to be used, including site-unique adaptation data not included in the software version
c. Security, privacy, or safety precautions relevant to the installation
d. Procedures for determining whether the version has been installed properly
e. A point of contact to be consulted if there are problems or questions with the installation

3.7 Possible problems and known errors.

This paragraph shall identify any possible problems or known errors with the software version at the time of release, any steps being taken to resolve the problems or errors, and instructions (either directly or by reference) for recognizing, avoiding, correcting, or otherwise handling each one. The information presented shall be appropriate to the intended recipient of the SVD (for example, a user agency may need advice on avoiding errors, a support agency on correcting them).

4. Notes.

This section shall contain any general information that aids in understanding this document (e.g., background information, glossary, rationale). This section shall include an alphabetical listing of all acronyms, abbreviations, and their meanings as used in this document and a list of any terms and definitions needed to understand this document.

5. Appendixes.

Appendixes may be used to provide information published separately for convenience in document maintenance (e.g., charts, classified data). As applicable, each appendix shall be referenced in the main body of the document where the data would normally have been provided. Appendixes may be bound as separate documents for ease in handling. Appendixes shall be lettered alphabetically (A, B, etc.).

Quality Assurance Surveillance Plan (QASP)

for the

Institute for Information Technology Applications (IITA) Program supporting Information Technology, Geospatial Engineering and Software Engineering BLANKET PURCHASE AGREEMENT (BPA)

For the

WEdge Shuttle DR Fixes and IT Support Performance Work Statement

Dated 30 March 2012

Current as of 30 March 2012

Contracting Officer Representative

The COR for this Call Order is:
Andrew J. Berry, Lt Col, USAFR
Director, Warfighter's Edge
Cell 719-235-7724

Tools of inspection for the Call Order

1. ONE-HUNDRED PERCENT INSPECTION
The COR will inspect and evaluate the contractor's performance each time it is performed. The results of the contractor's overall performance are then evaluated to determine acceptability of the service provided.

2. PERIODIC INSPECTION
These items are inspected using periodic surveillance (daily, weekly, monthly, quarterly, etc.) as determined by the COR. The results of the periodic surveillance inspections may be used as the basis for actions toward the contractor. In such cases the Inspection of Services clause becomes the basis for the contracting officer's actions.

3. CONTRACTOR METRICS
Metrics used to measure performance objectives stated in the PWS under 1.6 D-5. These metrics are usually developed and maintained by the contractor. QASP will be updated to include the specific contractor metrics (standard).

4. METHOD OF INSPECTION
Inspection will be performed by the COR on a regular basis as stated in the PWS. This will include but is not limited to the review of reports, testing documentation and the processes performed by the contractor."

5. INCENTIVES
Include positive and negative incentives to be applied to contractor performance. These will be applied based on the result. In addition the Government may offer an option to earn back or redeem positive performance incentives when negative performance has been reported.

Reported Data

The contracting officer representative (COR) will provide a monthly report by the 15th of the following month to the contracting officer. This report will provide metrics on compliance with all deliverables of the PWS and inspection results IAW the assessment plan.
The code iteration length will be reported in the monthly COR report.
Contractor metrics will be included in the monthly COR report.

Assessment Plan

Performance Objective:

Unit tests will be written around all requirements of the PWS.

Relates to Task 1 only.
BPA Section: 1.5.5.3
PWS Section: 1.5.5.3 Software Testing
Performance Threshold: 80% of all code is validated through unit testing procedures.
Frequency of Assessment: Monthly
Method of inspection: Government inspection of contractor metrics and documentation showing level of code coverage compliance.
Positive Incentive: If greater than 80% of written code is covered through unit testing procedures and can be validated, an incentive reward of $300.00 will be awarded. If this is not earned, it may be awarded in full if compliance is met by the end of the PoP.
Negative Incentive: If this performance objective is not met, the government may include an unsatisfactory CPARs rating.

Performance Objective:

A PMR will be conducted with the government including present program cost, schedule, technical status and risk status. Include metrics and updated schedules.

Relates to Task 1 and Task 2.
BPA Section: 1.5.6.3.5 (Requirement for every two weeks is not necessary for this PWS)
PWS Section: 1.6 D-7 Program management Review
Performance Threshold: 80% of all PMRs started on time with at least 24 hour slide delivery before the PMR with applicable information. 100% are started within the same week with at least 2 hours prior delivery.
Frequency of Assessment: Monthly (to be included in the COR's monthly report).
Method of inspection: 100% inspection via government logs.
Positive Incentive: This is awarded at the end of the PoP for Task 2. Should greater than 90% of all PMRs be started on time with 24 hour slide delivery before the PMR, an

incentive reward of $300.00 will be awarded. If the performance threshold is met but below 90%, the incentive reward will be reduced to $100.00. There is no way to recuperate this fee if it is lost.

Negative Incentive: If the performance threshold is not met an unsatisfactory CPARS rating may be given.

Performance Objective:

Project Plan Updated.

Relates to Task 1 only

BPA Section: N/A

PWS Section: 1.6 D-10 Project Plan

Performance Threshold: 70% of the time the project plan is updated by 5:00 PM at the end of a code iteration. 90% of the time the project plan is updated by 5:00 PM two days after the end of the code iteration cycle.

Frequency of Assessment: Beginning of each code iteration.

Method of inspection: 100% inspection of government records.

Positive Incentive: For Task 1, should the performance threshold become exceeded a CPAR rating will be created and reported for task 1. Expect a positive ratings.

Negative Incentive: Should the threshold not be met, a negative CPAR rating may be given.

Performance Objective:

Implement code scans.

Relates to Task 1 only

BPA Section: 1.5.5.4.2.3

PWS Section: 1.6 D-3 Code Scan

Performance Threshold: 80% of the time, 100% of issues found are discussed with zero high/critical, 5 medium and 20 lows unmitigated. 100% of the time, 100% of issues found are discussed with zero high/critical, 10 medium and 30 lows unmitigated. This is specific only to code written under Task 1.

Frequency of Assessment: End of each code iteration.

Method of inspection: Periodic Inspection via results of scans and contractor metrics review.

Positive Incentive: If the performance threshold is met an incentive reward of $300 will be given. If this is not earned, it may be awarded in full if compliance is met by the end of the PoP for Task 1.

Negative Incentive: Should the threshold not be met, a negative CPAR rating may be given.

Performance Objective:

Timely IT response.

Relates to Task 2 only.
BPA Section: N/A
PWS Section: 1.5.4.1 IT Support Tickets and 1.6 D-5 Metrics
Performance Threshold: IT support tickets completed before desired date at least 85% of the time. 95% of all tickets are completed within two weeks of desired date.
Frequency of Assessment: Quarterly.
Method of inspection: Random inspections of IT Support Ticket items will be performed on a quarterly basis.
Positive Incentive: Meeting or exceeding the performance threshold will include a $400 incentive reward.
Negative Incentive: Should the threshold not be met, a negative CPAR rating may be given.

Performance Objective:

Accurate Inventory.

Relates to Task 2 only.
BPA Section: N/A
PWS Section: 1.5.4.5 Inventory
Performance Threshold: 90% of all computer inventories are accountable within 2 hours of request. 98% of all computer inventories are accountable within 2 weeks of request.
Frequency of Assessment: Quarterly.
Method of inspection: Periodic inspection via government ADPE equipment list or via contractor records.
Positive Incentive: Should 99.1 to 100% of all computer inventory be accounted for an incentive reward of $600 will be given. Should 90% to 99% of all computer inventories be accounted for; an incentive reward of $400 will be given. If equipment is lost outside the control of the contractor and a report of survey clears responsibility of the contractor the full incentive reward may be awarded.
Negative Incentive: Should the threshold not be met, a negative CPAR rating may be given.

PERFORMANCE REVIEW MEETINGS

Performance metrics and results will be reviewed on a monthly basis. Should performance be determined unacceptable; the Government will notify the contractor and allow opportunity for improvement. The purpose of these meetings is to maintain a mutually cooperative working environment to foster successful Contractor performance and quality services delivered to the Government.

Request for Quotation
RFQ ID08120033

United States Air Force Academy (USAFA)
Institute for Information Technology Applications (IITA),
WEdge Shuttle DR Fixes and IT Support

Due Date: April 6, 2012




Submitted to:
Kortni Nevins, Contract Specialist
Email: kortni.nevins@gsa.gov
Heidi Sawyer, Contracting Officer
Email: heidi.sawyer@gsa.gov

Submitted by:
Team SDNC;
SofTec Solutions, Inc
developersDen, Inc
Next Tier Concepts, Inc
Chenega Consulting, LLC

GSA Contract Holder

SofTec Solutions
People. Experience. Results.

developersDen
There is a difference!

NTConcepts
ADVANCED SOLUTIONS

CHENEGA
GOVERNMENT CONSULTING, LLC

People. Experience. Results.

April 6, 2012

Heidi Sawyer
GSA, Federal Acquisition Service
Bldg 41, Room 145
Denver, CO 80225

RE: GSA Project Number ID08120033, Wedge Shuttle DR Fixes and IT Support at United States Air Force Academy

Dear Ms. Sawyer:

Team SDNC is prepared to submit the following proposal to the United States Air Force Academy (USAFA), Institute for Information Technology Applications (HQ USAFA/IITA) for WEdge Shuttle DR Fixes and IT Support Call Order. Having thoroughly reviewed the solicitation requirements, we are confident in our ability to perform on this effort.

Team SDNC takes no exceptions to the stated requirements and we agree to hold our offer firm for 180 days from the date specified for receipt of offers, 6 April 2012.

We look forward to discussing the contract details and responding to any additional questions. Please contact me at 303.662.1010 or email us at sales@softecinc.com.

Sincerely,

Frank Sain,
Chief Operating Officer (COO)
SofTec Solutions, Incorporated

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Table of Exhibits

1. Introduction

Team SDNC is prepared to submit the this proposal to the United States Air Force Academy (USAFA), Department of Education, Institute for Information Technology Applications (IITA) (HQ USAFA/DFEI), for WEdge Shuttle DR Fixes and IT Support Call Order. Our experience is directly related to this Call Order, and we are highly qualified to perform on this Call Order.

Our team has supported the USAFA WEdge since its inception; our projects include developing the current Geospatial and Software Development, Agile/Scrum processes, and training the initial cadre of IITA Google Earth Enterprise (GEE) providers in the Warfighters Geospatial Center (WGC). As incumbents on the USAFA IITA WEdge program, we are familiar with the networks, software, hardware, and processes and procedures at the Air Force Academy and we will provide the same dedicated support on this Call Order that USAFA has come to expect. Our proposed personnel for this contract are incumbents on tasks from this Call Order and include: Patrick Speer, Daniela Trapani, Steve Trapani, Chad Mello, and Mark Orlicky.

2. Technical Approach (RFQ Factor A)

Our technical approach depicted in the following paragraphs demonstrates our understanding, commitment, and approach to solving the difficult challenges facing USAFA, IITA, and the WEdge. Team SDNC's technical approach identifies the bugs/problem and provides a description of our solutions to the technical problems identified in the PWS. We will demonstrate our understanding of the problem, identify our approach to completing task requirements, and delineate the testing/SQA activities to verify the solution. This will include routine services, general work approaches, and task planning to successfully implement the solutions. Finally, we address Team SDNC's in-depth, tailored configuration management and testing procedures to test, verify, and enhance the existing WEdge tools.

2.1 Performance Category 3: Software Maintenance and Modification (PWS 1.5.3), Task 1

Team SDNC is well versed in the design and implementation of both the WEdge Shuttle Client v1.2 and the Tier2 software repository. We are also familiar with the identified issues, having performed a significant amount of development and testing of the software in question. Our Task Lead/System Architect will work with the customer to identify the most appropriate strategy for configuration management, with respect to these modifications. We anticipate that the level of effort to accomplish these tasks will not exceed five weeks.

2.1.1 Software Maintenance Tasks (PWS 1.5.3.1)

WEdge DR 2011-0041 (PWS 1.5.3.1.1)

Issue: Shuttle GUID blocks DAFIF Update GUI: As a route is opened that requires a DAFIF update, the dialog opens up behind the shuttle GUI.

Team SDNC's Solution: Our testing indicates that this issue is likely related to the use of modal, or "always-on-top", dialogs within the Shuttle Client application. Our approach to address this issue is to modify all dialogs to be non-modal, allowing the user to interact with the application in a more flexible manner. This change in behavior will have no negative effect on users, since dialogs will initially display on top of other forms, and will no longer prevent the user from activating other forms.

Testing and Verification: This issue is the result of a change to a previous requirement. In an earlier version of Shuttle, the requirement was to make the Shuttle windows always display on top. Team SDNC's SQA Engineer is familiar with this functional behavior. After we modify the software to change the behavior of informational dialogs, the SQA Engineer will test it by starting up Shuttle Client and

selecting a PFPS Route to display. Our SQA Engineer will ensure the version of FalconView has an outdated version of DAFIF. The window for the DAFIF update message should now display; and the SQA Engineer will verify that other forms can be freely selected.

WEdge DR 2011-0042 (PWS 1.5.3.1.2)

Issue: Shuttle Filter MAJCOM/NAF/Base/Unit causes unhandled exception. Choosing a WEdge Master name and MAJCOM filter values other than "all" causes an error message to be displayed.

Team SDNC's Solution: This issue is occurring in the WEdge Master Configuration Utility and is related to adding MAJCOM/NAF/Unit/Base information. Our previous testing indicates that when a specific filter is selected, the look-up value passed as the parameter to a SQL Server-stored procedure is not being processed correctly. Our approach to fixing this issue is to correct the invalid parameter value and verify that the records matching the filter option returned by the SQL Server are valid.

Testing and Verification: Testing of this issue is straightforward and reproducible. After the developers implement the changes, the SQA Engineer will verify that the filter options operate as expected by selecting various filtering options and ensuring that the correct values are displayed in the user interface.

WEdge DR 2011-0044 (PWS 1.5.3.1.3)

Issue: Shuttle WEdgeMasterPolling service doesn't start or it stops on Tier 2. Periodically the Tier 2 (WEdge Master) polling service doesn't start. This may be a problem with the SQL service not starting properly on the Tier 2. This is an inconsistent error that cannot always be reproduced.

Team SDNC's Solution: This issue is almost certainly related to the requirement for the WEdgeMasterPolling service to communicate with the SQL Server database. While the service is set to retry three times, our analysis shows this is probably not the best approach. We plan on modifying the service to continuously "ping" the SQL Server and attempt to connect when it becomes available. This approach has the benefit of handling a temporary interruption of connectivity without relying on user interaction to restart the service.

Testing and Verification: After we have implemented our changes, we will attempt to reproduce the issue. Due to the intermittent nature of this error, effective testing will be somewhat time-consuming. Team SDNC's SQA Engineer will exercise the Shuttle Client repetitively, over an extended period of time, in an attempt to replicate the issue. We will also verify the recoverability of the solution by intentionally interrupting the connection to the SQL Server and verify that the service successfully recovers once the connection is re-established.

WEdge DR 2011-0045 (PWS 1.5.3.1.4)

Issue: Shuttle inconsistent display. Some of the buckets that should be displayed are not consistently displayed. For example, four should be visible but only three are. A client polling service restart sometimes fixes this issue.

Team SDNC's Solution: This issue is most likely related to the Client Polling Service. Our approach to address this issue will consist of three steps. First, we will examine the possibility of a conflict between the shuttle client and polling routine to determine if this is a simple matter of the shuttle trying to access a file while it is still being written by the polling routine. Second, we will examine the Client Polling Service for potential memory leaks; over time, mismanaged resources such as unreleased streams and objects used for sync functions may accumulate and consume the service's available resources, causing intermittent problems with polling. This type of issue could explain why restarting the service temporarily fixes the issue. Finally, we will examine the timing logic for syncing. When polling occurs, certain files may not have propagated to Tier2 yet (i.e. when a bucket is being modified), so it is possible that these files might be missed altogether.

Testing and Verification: This is a somewhat intermittent error; therefore, verification of the corrective actions may be time-consuming. Our SQA Engineer will exercise the Shuttle Client repetitively in an attempt to identify a sequence of actions that cause the error. We will then replicate that sequence after the developers have implemented their changes. Since we have observed this error a number of times, we are confident that we can replicate it in the test environment; Team SDNC's SQA Engineer will run various scenarios in the test environment to verify that the defect has been corrected.

WEdge DR 2011-0046 (PWS 1.5.3.1.5)

Issue: Shuttle menu display doesn't always match highlighted bucket names. When a user creates a bucket, the bucket is initially highlighted as though it is selected for action. The mouse-over tooltip reads information about a different bucket.

Team SDNC's Solution: This issue occurs in the Shuttle user interface (UI) after a user selects a different bucket in the tree view; this may mean that the controls on the UI are not being updated properly after a bucket selection. We will address this inconsistency by ensuring that control events are being invoked appropriately, and all UI controls are notified when a different bucket is selected. This will provide the user with a consistent UI experience, and eliminate any confusion concerning the currently selected bucket.

Testing and Verification: This defect is predictable and easy to replicate. Verifying that the defect has been resolved will entail building several buckets in Shuttle Client and verifying that the different menu and "mouse-over" displays read correctly.

WEdge DR 2011-0047 (PWS 1.5.3.1.6)

Issue: Shuttle bucket permission not publishing correctly. During regression testing for Shuttle v1.2, it was discovered that when a bucket is created, permission do not always publicize properly. For example, the user may create a bucket on Tier2-A read permissions set for Tier2-C and the bucket may not show up on Tier2-C. This is an intermittent problem.

Team SDNC's Solution: This concern is likely related to the communication mechanism built into the Tier2 Polling Service. Our plan is to examine the Tier2 logic to determine if the issue is in the originating Tier2 where it may not be passing the permissions through properly, or if it is an issue with the receiving Tier2 not properly recording the permissions. Buckets are handled differently than WEdge items in Tier2, so it is possible that an issue is in the areas that handle buckets while writing them to the Tier2 database. We will also examine the Tier3 Client Polling Service to determine if the intermittent problem is directly or indirectly related to PWS 1.5.3.1.4. Additionally, we will examine the logic on Tier3 to ensure that it is reliable in properly setting permissions when a user modifies bucket permissions through the UI.

Testing and Verification: While this is an intermittent problem, it does occur frequently. In the SDNC Test Lab, the SQA Engineer will create a test scenario comprised of multiple Shuttle Clients connected to multiple Tier2s. We will attempt to isolate a sequence of events required to replicate the issue. Using that scenario, combined with multiple alternate scenarios, we can verify that the issue has been resolved.

WEdge DR 2011-0048 (PWS 1.5.3.1.7)

Issue: Shuttle size limitations. During regression testing, it was discovered that there is a limitation on file sizes within the Shuttle and or a limitation on the bucket sizes. In testing 500MB bucket, shuttle would not publish nor update. The error needs to be handled gracefully and limit should only be due to resources available.

Team SDNC's Solution: Our testing indicates that the polling service on either Tier2 or Tier3 is not handling file chunks properly when large files are published via the Shuttle is the most likely cause. More specifically, our previous testing indicates this occurs when a total bucket size exceeds 500MB, and individual file size exceeds 350-400MB. We will examine the Tier3 Polling Service and determine if this is a self-limiting problem where it is not handling file chunks in a timely manner, and to ensure that the

Tier2 Polling Service can handle receiving and sending files/packages of any size. If it is determined that a file size restriction is necessary due to available resources, the user will be notified of this limitation, providing the user with a consistent UI experience and eliminating any confusion on whether or not a selected bucket was published successfully.

Testing and Verification: To verify that the issue has been resolved, we will build files and buckets that exceed these sizes and verify that they can be successfully published.

WEdge DR 2011-0049 (PWS 1.5.3.1.8)

Issue: Current shuttle behavior allows any user to change WEdge Master connection without inputting any credentials. Require the user to log into a Wedge Master with credentials such as username and password before connecting. Alter behavior to comply.

Team SDNC's Solution: This issue appears to be due to a lack of proper requirement analysis by the original author. We will remove the capability of selecting a new Tier2 from within the Shuttle Client; which requires the user to delete the current WEdge Master List Encrypted (WMLE) file (requires administrator permissions) and restart the application. The user will then be prompted for connection credentials for the new Tier2 before allowing a connection to be established.

Testing and Verification: Verification of the corrective action will be straightforward, requiring our SQA Engineer to ensure that a user can no longer select a different Tier2 from within the Shuttle Client. We will also delete the current WMLE and ensure that the user is prompted to provide appropriate credentials to re-connect to a Tier2.

2.2 Performance Category 4: Information Technology Support (PWS 1.5.4), Task 2

Supporting the WEdge network consists of maintaining the availability and integrity of network connections, both internal and external, including Aeronautics Laboratory, and Fairchild Hall 4th and 5th floors. Any device connected to the network is maintained and supported by the Network Engineer including desktops, laptops, servers, printers, copiers, and scanners. VPN will be monitored and made available using Microsoft ISA Server 2006. Inventory is controlled through USAFA 10/CS IT Accountability and will be maintained by the Network Engineer who will be the Primary Equipment Custodian (PEC). Annual inventory checks are performed to keep accurate count of all hardware and software.

2.2.1 IT Support Tickets (PWS 1.5.4.1)

Trouble Tickets (IT Service Requests) will be entered and tracked using Microsoft SharePoint Server 2010. We are familiar with the tracking system considering our Network Engineer was the individual who designed and implemented it. The intranet site area is made available to all members of the WEdge team. The IT Service Request submission form allows team members to assign a severity level, desired time/date of resolution, and describe in detail the situation/issue/problem(s). Requests will be prioritized and handled by severity level.

2.2.2 Small Computer Support (PWS 1.5.4.2)

PC-based computers (workstations and laptops) will be maintained with up-to-date patches, Windows Updates, and virus definitions. Computers will maintain a stable network connection in order for all patches, Windows Updates, and virus definitions to be downloaded within two business days when available. Norton Endpoint Protection and McAfee Antivirus will be the main virus programs used (USAFA-approved AV programs). The WEdge network uses a Proxy server to access the internet; all virus protection software on workstations/laptops will be specifically configured to use said Proxy server to continuously check for updates while the computer is connected to the network. Windows Updates is

also configured to download and install updates automatically; and all OS licenses will be tracked per machine. When new laptops and desktops arrive, Team SDNC's Network Engineer will install all necessary software, ensuring proper licensure, for the WEdge user to perform his/her duties successfully. All license expiration dates will be monitored and the Government will be notified 90 days prior to their expiration dates.

Desktop/Server support will also be performed by the Network Engineer for Windows XP/Vista/7, and Server 2003 and 2008.

2.2.3 Network Hardware Support (PWS 1.5.4.3)

Team SDNC will provide the network support for the WEdge DREN network infrastructure housed in three buildings and the new server room. Two full racks of servers (13), storage arrays (3), and switches (5), located in the Aeronautics Laboratory server room, house all production servers and will be maintained by the Network Engineer (performance, availability, and integrity). Contacting DELL Support will be mandatory for critical issues causing substantial downtime. Maintenance/service agreements for all equipment in the racks will be maintained as well.

All servers, physical and virtual, will be configured with antivirus software protection. AV software will be configured to download updated virus definitions automatically when they are made available by the vendor. All IAVA patches will be installed via direct download, Windows Updates, or physical mitigation. Retina scans will be performed on all network connected devices once a month and all vulnerabilities will be addressed/mitigated. Any actions required to achieve compliance with TCNO requirements will be accomplished within two business days.

2.2.4 Network Software Support (PWS 1.5.4.4)

Team SDNC's Network Engineer will be responsible for administering the services and applications listed below:

Microsoft Server 2008 R2 Active Directory Environment

- Create and maintain Active Directory user and computer accounts
- Manage DNS (internal and external)
- Create and manage login scripts
- Create and manage security and distribution lists

Microsoft Exchange Server 2010

- Create and manage mailboxes and forwarders
- Support OWA access via web and mobile devices
- Monitor and block spam emails accordingly
- Perform database maintenance using Exchange PowerShell

Microsoft ISA Server 2006 (Proxy/Firewall/VPN)

- Create and manage VPN accounts
- Create and manage firewall rules
- Monitor VPN/firewall activity
- Run monthly traffic activity reports

Microsoft SharePoint Server 2007/2010

- Manage Active Directory account access to contract-specific sites
- Manage IT Service Requests site

- Create and set permissions to contract-specific sites
- Perform maintenance on SQL server databases

Microsoft Lync Server 2010

- Create and manage user accounts
- Import/export client user lists using Lync PowerShell
- Support for desktop clients and mobile devices (chat, voice, video)

Microsoft Team Foundation Server (TFS) 2008/2010

- Manage Active Directory account access to specific projects
- Support connectivity via Visual Studio 2010 and web portal
- Perform maintenance on SQL Server databases

Microsoft Data Protection Manager

- Manage backups of all production servers
- Install and configure server connection services for new backups
- Create new backup plans when necessary
- Add/configure drives when space is critical

Microsoft Hyper-V Manager/System Center Virtual Machine Manager

- Create and manage virtual machines
- Perform virtual machine migrations when necessary
- Manage Active Directory access to specific connected servers and web portal users
- Perform routine maintenance of removing old/unused virtual machines

Microsoft Cluster Server

- Manage cluster availability
- Manage virtual machine high availability for Test FARM
- Physical migration of virtual machines from failing nodes
- Perform maintenance on servers in cluster

Microsoft Server 2008 R2 File Shares

- Manage access to all file shares on file server
- Update software file share with new available products
- Create/edit Active Directory login scripts for mapped drives

3rd Party Software License Servers

- Manage and maintain license servers

Maintaining the server infrastructure also includes maintenance for the DELL Celerra NX4 and DELL EqualLogic PS4000 storage arrays.

Our Network Engineer will be responsible for the Test FARM, DELL R710 (5) in a clustered/Hyper-V environment. Responsibilities also include creating, supporting, and maintaining all virtual machines for software testing. All systems listed above will remain in an operational state and will have no down time longer than one hour per month.

2.2.5 Inventory (PWS 1.5.4.5)

Team SDNC's Network Engineer will be responsible for maintaining all hardware and software inventory in the ADPE inventory list, by acting as Primary Equipment Custodian (PEC). PEC will be required to perform an annual inventory assessment issued by 10CS/IT Accountability. All equipment will be accounted for and the inventory signed by the Commanding Officer. If any equipment is missing, a ROS (Report of Survey) must be issued and an investigation will be sanctioned. Hand receipts will be issued to anyone using a piece of equipment whether on or off base. All hand receipts will be kept in a binder required by 10/CS IT Accountability. The PEC will also be responsible for adding new equipment, and equipment that is transferred from other departments when it is received. Commercial off the Shelf (COTS) software will also undergo an annual assessment. All software in use must be disclosed, and all unused software must be destroyed along with all documentation.

2.2.6 Period of Performance (PWS 1.5.4.6)

The period of performance for Task 1 (WEdge Shuttle Fixes) is five weeks from date of award or established start date. The period of performance for Task 2 (IT Network Support) is four years (base plus three options) from date of award or established start date.

2.3 All Software Tasks (PWS 1.5.5)

Team SDNC has the ability to perform a variety of software tasks to ensure the project is complete and delivered on time. We have extensive experience in the areas of software testing, configuration management, security, certification, and accreditation. Since we originally created the InstallAware installer for the WEdge Shuttle, modifying the existing code to include all source code changes will be a simple task for our developers.

2.3.1 Installer Code Writing (PWS 1.5.5.2)

We will modify the existing InstallAware installer project to incorporate all source code changes implemented in the execution of the defined software maintenance tasks. If time permits, we will combine the current WEdgeMaster and WEdgeMasterAPI installers into a single install package to reduce the effort on the customer in creating a complete WEdgeMaster installation. We will ensure that the final installer accounts for all required prerequisites and they are delivered in an efficient manner. Additionally, installers will have the ability to execute in a silent/unattended manner and will create a detailed logfile. Finally, an uninstall will create detailed installation logs, and upon uninstall, remove all traces of the application (with the possible exception of user data files).

2.3.2 Software Testing (PWS 1.5.5.3)

In general, Team SDNC uses a requirements-based testing approach to software testing, endorsed by the *IITA Software Development Process* document, and used today by the IITA WEdge contractor team. However, Task 1 is primarily a bug-fix project; therefore there are a few minor adjustments to the testing process.

For Task 1, the initial focus of our SQA Engineer is to understand the bug thoroughly so the team can replicate the bug in the test environment. This requires our SQA Engineer to be knowledgeable of the application program in advance to determine if the developer fixed the bug correctly. Team SDNC's SQA Engineer has already seen and understands all of the errors in Task 1. After all bugs have been fixed, Regression Testing is required to ensure that none of the bug fixes regressed existing software capabilities. During the Regression Testing of Shuttle V1.2, six of the nine errors were discovered and documented by the SQA Engineer; this knowledge is the basis of each acceptance criteria.

Team SDNC believes in the SQA Engineer's continuous involvement, at multiple locations and times, monitoring the entire software development process. For this project the requirements are the bug fixes,

which are clearly defined in Task 1. Several of the bugs affect existing requirements, while several are also new requirements for Shuttle.

All software code written or modified in support of this Call Order will be unit tested to ensure functionality. Additionally, to ensure operational functionality, we will use functional testing, white box testing, and regression testing where appropriate. As a Warfighter application, this software must operate under surge load levels with users in many locations. We will load test all code to simulate large loads originating from several locations using available Virtual Machines (VMs) and test networks. All code is scanned using Fortify and other tools to identify potential vulnerabilities.

2.3.3 Software Security, Certification and Accreditation (PWS 1.5.5.4)

As described in our initial BPA proposal, we will adhere to all IA requirements and provide technical assistance to WEdge IA personnel. This assistance will include, but is not limited to, changes to the existing architecture information, including any changes to IA controls and the usage of any ports and protocols.

DoD Information Assurance policies (PWS 1.5.5.4.1)

We will continue to participate in any required ADLS training with respect to IA policies. Our team's compliance will be monitored and reported on by the Project Manager/Architect.

Software Reviews and Scans (PWS 1.5.5.4.2)

- **Code Reviews (PWS 1.5.5.4.2.1)**

Our team will perform code reviews covering all software development tasks associated with the defined software maintenance tasks. Code reviews will be conducted during each code cycle (Agile Sprint) and documented in Deliverable D-2. Our current process incorporates our SQA Engineer, who acts in the role of observer, to ensure team compliance. These observations are documented in the Test Report and provided to the customer as a project deliverable. The IITA requirement is that 100% of the code be reviewed; proposed personnel on this Call Order were in compliance to said IITA requirements on the previous contract.

- **Fortify Scans (PWS 1.5.5.4.2.2)**

In addition to our normal focus on writing secure code, our team utilizes static code analysis tools to identify possible vulnerabilities, as well as poor coding techniques. This approach, combined with our extensive use of peer code reviews, will allow us to deliver safe and secure products to the customer. Fortify Scans will be conducted on all new and modified code. We are well-versed with HP Fortify, but can make use of a number of leading scanning products. Our SQA Engineer will work hand-in-hand with developers and testers, in real time, to ensure software products meet requirements.

- **Software Vulnerability (PWS 1.5.5.4.2.3)**

Team SDNC will ensure all code related to this Call Order is scanned for vulnerabilities and the vulnerabilities corrected or mitigated prior to delivery. We hold ourselves to the highest standards with respect to delivering secure software products. We will never deliver software that contains serious vulnerabilities, and when time permits, we will address low-risk findings.

- **Standard Technical Implementation Guides (STIG) Reviews (PWS 1.5.5.4.2.4)**

Our team members have already reviewed all applicable STIGs and continue to refer to these guidelines as a part of our normal development process to ensure there are no category 1 vulnerabilities. We will provide documentation of reviews and evidence they were performed on the latest version of the STIGs to the WEdge PMO. Our team is comprised of WEdge Veterans, who worked on the WEdge program until the end of the previous contract on 31 March 2012, and are intimately familiar with the STIGs.

2.3.4 Configuration Management (PWS 1.5.5.6)

Team SDNC will be utilizing Team Foundation Server (TFS) as our source repository. Our Task Lead/System Architect will ensure all software developers follow industry "best practices" such as frequent code check-ins utilizing the pre-defined source branches within the TFS Team Project. We will ensure separation between active development, system test, and release candidate source branches are maintained. Team SDNC will follow the configuration management processes outlined in our BPA proposal. We are full participants in the IITA Configuration Control Board (CCB), and understand the process thoroughly. Our developers use the automated tools to control the source code, and the SQA Engineer monitors the process and product to ensure compliance and safeguarding of the source code.

2.4 Deliverables and Acceptance Criteria (PWS 1.6)

The person responsible for each deliverable is identified in Exhibit 1.1. All deliverables are included in the Project Schedule, Appendix A, to ensure that all are delivered on time and in proper format. Deliverables D-4 and D-6 are not required because Team SDNC will conduct all work on the WEdge DREN Network, and we will use the Government's SharePoint site.

Delivery #	Deliverable	POC
D-1	**Test Plan:** We will create a test plan, in accordance with industry standards, that defines our testing strategy for the project. This test plan will be made available to the customer for review within ten days of award.	Mark Orlicky
D-2	**Code Review Results:** Our SQA Engineer will oversee all code reviews and document the results. These results will be included in the test report and made available to the customer for review on the last day of each code iteration cycle.	Mark Orlicky
D-3	**Code Scans:** All code scans will be documented in a summary report, with our findings and actions taken on the last day of each code iteration cycle.	Pat Speer
D-4	**Vendor Network Compliance:** Not applicable, as we will be using the WEdge DREN network.	N/A
D-5	**Status Reports:** We will produce regular status reports at the end of each code iteration cycle, and monthly for scheduled PMRs, and then publish them to the PMO SharePoint site.	Pat Speer
D-6	**IDE Plan:** This not applicable, because we will utilize the PMO SharePoint site as our document and report repository.	N/A
D-7	**Program Management Review:** We will hold regular PMR's with the customer on the first Wednesday of each month at 10:00AM to discuss program status.	Martin Payne
D-8	**Status Meeting:** We will hold weekly status meetings on Wednesday mornings at 10:00AM with the PMO to discuss project status.	Pat Speer
D-9	**Technical Software Design Document Reviews:** We will produce a Software Design Document which details our approach to the development tasks being undertaken. This document will be made available to the customer for review and will be included with the final deliverables.	Pat Speer
D-10	**Project Plan:** A project plan will be created during Sprint 0, utilizing Microsoft (MS) Project. This document will be formally updated at the start of each iteration cycle and made available to the customer. It will also be included in the final deliverables.	Pat Speer

Delivery #	Deliverable	POC
D-11	**Full Capabilities Briefing:** A capabilities briefing will be created, using MS PowerPoint, describing the software solution at a high level. It will be technical in nature, made available to the customer, and will be included in the final deliverables.	Pat Speer
D-12	**Software Requirements Specification (SRS):** A SRS will be created by our SQA Engineer, reflecting our understanding of the requirements, and updated within 30 days of award and at the end of each iterative cycle. This document will be made available to the customer for review, and will be included with the final deliverables.	Mark Orlicky
D-13	**Requirements Traceability Matrix (RTM):** A RTM will be created by our SQA Engineer, providing for complete traceability of the requirements through our development tasks and deliverables. The RTM will be updated at the end of each iterative cycle, and finalized with code completion. This document will be made available to the customer for review, and will be included with the final deliverables.	Mark Orlicky
D-14	**Software Version Description (SVD):** A SVD will be created by our SQA Engineer describing in detail the version of the software that is being delivered, changes that have been made to it, and any specialized instructions relating to adaptation. An inventory of the materials released and the software contents will be provided. In addition, this document will contain the installation instructions, and known bugs will also be described. This document will be made available to the customer for review, and will be included with the final deliverables.	Mark Orlicky

Exhibit 1.1. Deliverable Responsibility. IITA receives accountability on all project deliverables.

If any of the bug fixes under this Call Order require it, Team SDNC will update the Installation Guide/Release Notes, Test Reports, and User Guides. These documents will be delivered with the final deliverables.

Team SDNC has broken down the requirements into achievable tasks to minimize risk and ensure efficient task management. These tasks are attached in Appendix A in a detailed MS Project Schedule.

2.4.1 Inspection (PWS 1.6.1)

Deliverables will be reviewed and approved by at least one level of our team's management before submission to the Government. Additional detail is included in the Quality Assurance Section (Section 4).

All software developed for IITA is peer reviewed for compliance with the *IITA Software Standards Manual* with the SQA Engineer witnessing the process. Team SDNC's experts ensure that 100% of the code is critically reviewed for readability, logic, coding practices, and proper commenting to meet USAFA IITA standards.

All documents to be delivered to the IITA WEdge program are prepared following the Team SDNC documentation process. The document author, the author's supervisor, and our SQA Engineer prepare the schedule for the deliverable emphasizing on early preparation and reviews. IITA WEdge leadership is informed of the schedule and is provided draft versions of the document for pre-review purposes. Team SDNC uses the IITA SharePoint system to manage the documentation and review comments from the IITA customer.

3. Project Management Approach (PWS 1.5.6)

The PM is responsible for oversight of the project and ensuring that the work is completed on schedule and within budget, and for ensuring timely delivery of all contract deliverables. The PM has overall responsibility for the monthly PMRs.

The Task Lead is the primary point of contact for the Government for daily operations and technical issues, and is responsible of the completion of all Call Order technical requirements and compliance with specifications. The Task Lead develops and provides all required supporting documentation for the weekly status reviews as well as updating the project plan at the start of each code writing iteration cycle.

Our team organization for this Call Order is shown in Exhibit 1.2.

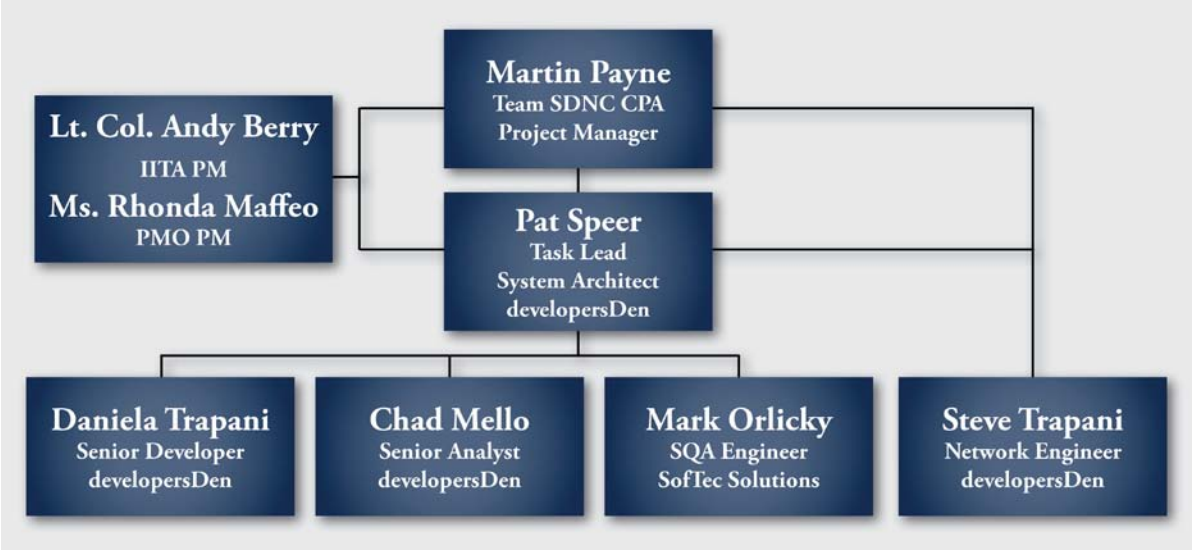

Exhibit 1.2. Call Order #1 Organization Chart. IITA receives the services of dedicated, trusted personnel and clear lines of communication with the support of Team SDNC's CPA PM.

Interaction with IITA (PWS 1.5.6.1)

Our team members have been deeply involved in the WEdge Program and understand the criticality of ensuring the security of all software, especially the software programs like WEdge, designed specifically to support the Warfighter. Our team will work in partnership with the WEdge PMO IA/C&A personnel to ensure the integrity of the system.

Project Management (PWS 1.5.6.3)

Our PM and Task Lead will work closely with both Lt. Col. Berry and Ms. Maffeo throughout this project. Direct communication between Government staff and our team members on technical issues and questions is encouraged.

Program Management Plan (PWS 1.5.6.3.1)

Our team organization chart is included in Exhibit 1.2 while Exhibit 1.1 identifies each deliverable and responsible team member. The Project Schedule in Appendix A shows our five week plan for completing all Task 1 deliverables; it assumes a Call Order award on 9 April. The schedule will be updated based on the actual award date and start date. The project schedule depicted in Exhibit 1.8 for the Sprints will be updated and expanded during Sprint 0 planning activities. While the Call Order requires that the project schedule be updated at the start of each cycle, our standard procedure is to update the schedule throughout the Sprints to ensure it is always current. The schedule will be updated on the SharePoint site as changes occur.

Metrics (PWS 1.5.6.3.2)

Metrics for this Call Order are detailed in the Quality Section.

Integrated Digital Environment (IDE) (PWS 1.5.6.3.3)

Meeting minutes, metrics, and documentation will be posted on the Government's SharePoint Site.

Meetings (PWS 1.5.6.3.4)

If issues arise during execution of the Call Order, COR Lt. Col. Berry will be notified immediately. Any member of the team is authorized to report the issue to the COR/PMO.

Project Management Reviews (PMR), Status and Technical Design Meetings (PWS 1.5.6.3.5)

Required monthly PMRs (first Wednesday of each month, 10:00 AM) and weekly status meetings (Wednesdays 10:00 AM), D-7 and D-8 respectively, are included in the project schedule to ensure each is conducted on time. We have included a milestone in the schedule to ensure agendas, slides, and other required "read ahead" material are delivered to all participants at least 24 hours in advance. As scheduled, there is currently only one PMR during our five week schedule for Task 1. We will schedule another PMR during the Task 1 time frame if the Government desires.

While not specifically shown in our project schedule, status reports and status meetings will continue throughout the Period of Performance (PoP) for Task 2. While Call Order SOW Section, 1.5.6.3.4, states that PMRs are not required for IT support, we will support PMRs for this task if the Government requests them.

We will conduct technical design, status, and Scrum meetings with the developers, DBAs, IT professionals, and the customer; these can be scheduled as often as necessary. As part of our Scrum process, we have included a Sprint Results Demonstration and a Sprint Review in each Sprint cycle of our project schedule.

4. Quality Control (RFQ Factor B)

4.1 Quality Program Plan

Our Quality Program Plan implementing our Quality Management System (QMS) is fully described in our BPA proposal and we will follow the described overall process for this Call Order. Our quality efforts are focused on delivering all products and deliverables on schedule while meeting or exceeding Call Order requirements. We have identified several metrics for each task as shown below. The Task Lead is responsible for overall compliance and is the primary point of contact for Task 1.

For visibility by the Team SDNC Executive Board, after each PMR we will provide a copy of slides and briefing materials to the Executive Board Members. We will coordinate the release of PMR information to the Executive Board to ensure that no sensitive information is released.

4.2 Metrics (PWS 1.5.6.3.2)

We have identified the following metrics that we will monitor continuously to ensure all products and deliverables meet or exceed contract requirements.

For Task 1, we have identified the following metrics:

Task 1 Metrics	POC
1. Sprint Burndown Chart	Pat Speer
The Sprint Burndown chart shows the progress and work accomplished on each specific task required to complete each Product Backlog Item (PBI) identified during Sprint planning needed to satisfy the project requirements. The data is extracted from TFS daily, posted within the team area for their information, and updated in the SharePoint IDE.	
2. Project Plan	Pat Speer
The Project Plan is updated during Sprint 0 for the entire project, formally updated at the start of each Sprint, and updated within each Sprint as needed. Project progress is measured against the baseline; and the updated Project Plan is stored on the SharePoint IDE when a change is made.	
3. Team Velocity	Pat Speer
Team Velocity is a measure of the number of PBIs completed by each developer during the Sprint cycle. It is a measure of developer productivity, and is very useful in project and Spring planning and scheduling for current and future efforts.	
4. Vulnerabilities Identified	Pat Speer
Number of vulnerabilities, and the category of each, identified by software scans.	
5. Vulnerabilities Resolved	Pat Speer
Number of vulnerabilities, by category, resolved - Goal is 100%.	
6. Defects Identified	Mark Orlicky
Number of defects identified during SQA testing.	
7. Defects Resolved	Mark Orlicky
Number of identified defects resolved - Goal is 100%.	
8. Unit Test Code Coverage	Mark Orlicky
Number of lines of code unit tested divided by the number of lines of code written. Minimum requirement is 80% - Goal is 100%.	

Exhibit 1.3. Task 1 Metrics.

For Task 2, we have identified the following metrics:

Task 2 Metrics	POC
1. Average time to resolve trouble calls. Data derived from trouble ticket system.	Steve Trapani
2. Percentage of Service requests completed by the desired date. Minimum requirement is 85% by the desired completions date and 95% within two weeks of desired date. Goal is 100% completion by scheduled completion date.	Steve Trapani
3. All PCs updated with latest virus definitions with 2 days of release - Goal 100%.	Steve Trapani

Task 2 Metrics	POC
4. PC software licenses current, and no unauthorized Software on PCs - Goal 100% compliance evaluated by periodic inspection of random sample of PCs. Report any instance of use of unauthorized software to the COR with 2 business days.	Steve Trapani
5. Severs updated with virus definitions and compliant with IAVAs and TCNOs within required time frames. Goal is to achieve all deadlines as specified in the Call Order SOW 100% of the time. Data stored in SharePoint IDE.	Steve Trapani
6. Maintain servers and associated storage to provide greater than 99.9% reliability (less than 1 hour per month unscheduled downtime).	Steve Trapani

Exhibit 1.4. Task 2 Metrics.

All metric information will be stored on the SharePoint IDE and will be briefed at the PMRs. When there is an issue complying with any metric it will be presented at the weekly status meeting to ensure focused attention on resolution.

To ensure the quality of all deliverables, each will be reviewed by the Task Lead for technical and format compliance before delivery to the Government. For those deliverables where the Task Lead is the author, the review will be done by the Program Manager.

4.2.1 Closing Call Order 1

After all interim milestones have been accomplished and all deliverables accepted, the COPM conducts a final review of all Call Order requirements; first with the Team SDNC PM, and then with the IITA PM, or designated POC, to validate that all requirements have been satisfied. After technical “sign off” on all Call Order requirements, the PM and Team SDNC will work with the CO to formally close the Call Order and submit final invoices.

5. Call Order Pricing (RFQ Section 1.1, RFQ Factor C)

ITEM No.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
0001	Labor (FFP) to successfully perform services IAW PWS Task 1, Wedge Shuttle Fixes				$ 70,474.00
0002	Labor (FFP) to successfully perform services IAW PWS Task 2 IT Network Support	12	MO	$ 11,590.00	$ 139,080.00
OPTION 1001	Labor (FFP) to successfully perform services IAW PWS Task 2 IT Network Support	12	MO	$ 11,590.00	$ 139,080.00
OPTION 1002	Labor (FFP) to successfully perform services IAW PWS Task 2 IT Network Support	12	MO	$ 11,590.00	$ 139,080.00
OPTION 3001	Labor (FFP) to successfully perform services IAW PWS Task 2 IT Network Support	12	MO	$ 11,590.00	$ 139,080.00

Exhibit 1.5. Team SDNC Proposed Price and Cost Schedule. IITA retains outstanding services by the incumbent personnel with Team SDNC.

5.1 Category 3: Software Maintenance and Modification, Task 1

* Estimated 5 weeks effort at 40 hours/week for entire team = 200 hours/person.

** Estimated 5 weeks effort at 2 hours/week for entire team = 10 hours/person.

Name	Labor Category	MDR GSA Sch. Rate	Final Reduced Rate	Disc. %	Est. 5 Weeks Cost
developerDen, Inc.					
Pat Speer *	System Architect	$ 98.72	$ 95.76	3.00%	$ 19,152.00
Chad Mello *	Sr. Application Programmer	$ 88.31	$ 85.66	3.00%	$ 17,132.00
Daniela Trapani *	Sr. Application Programmer	$ 88.31	$ 85.66	3.00%	$ 17,132.00
SofTec Solutions, Inc.					
Mark Orlicky *	Sr. Programmer Analyst II	$ 98.08	$ 80.11	18.32%	$ 16,022.00
Martin Payne **	Project Manager III	$ 107.24	$ 103.57	3.42%	$ 1,036.00
Total Estimated Cost for Task #1:					**$ 70,474.00**

Exhibit 1.6. Category 3: Software Maintenance and Modification, Task 1 Rates. IITA receives additional discounts off of our Minimum Discounted Rates (MDR) from the BPA.

5.2 Category 4: Information Technology Support, Task 2.

* Estimated 48 weeks effort at 40 hours/week for 1 consultant = 1920 hours.

** Estimated 12 months effort at 1 hour/month for 1 consultant = 12 hours.

Name	Labor Category	MDR GSA Sch. Rate	Final Reduced Rate	Disc. %	Est. Annual Cost
developerDen, Inc.					
Steve Trapani *	Sr. Consultant	$ 93.24	$ 71.79	23.01%	$ 137,837.00
SofTec Solutions, Inc.					
Martin Payne **	Project Manager III	$ 107.24	$ 103.57	3.42%	$ 1,243.00
Total Estimated Cost for Task #2:					**$ 139,080.00**
Total Estimated Cost for Tasks #1 and #2:					**$ 209,554.00**

Exhibit 1.7. Category 4: IT Support, Task 2 Rates.
IITA receives additional discounts off of our MDR from the BPA.

Team SDNC estimates the level of effort necessary is five weeks of work. Therefore, we have broken the work into Task 1 and Task 2, with Call Order program management included as a separate line covering both tasks throughout the life of the contract. Our notional Project Schedule, depicted in Appendix A, delineates our five-week approach based on the requirements. We have made assumptions based on the information provided in the RFQ, and the schedule can be adjusted and tailored to meet final project requirements upon award.

Team SDNC has taken the following assumptions in our pricing:

1. For Option Year 1001, 1002, 1003 price is at the current GSA Schedule 70 rates. Upon approval of annual increase by GSA, we will escalate the out-years and submit the revised pricing.
2. For Item No. 0001, we will invoice in two parts; the 1st Invoice would be at the end of April, 2012 and the 2nd Invoice would be at the completion of the work for item No. 0001.
3. Detailed amounts shown in Exhibit 1.5 are rounded to the whole dollar in accordance with RFQ Section 4.0.

6. CPAR's Contact (RFQ 4.0)

6.1 SofTec CPAR's Registration

Name: Martin Payne
Address: 384 Inverness Parkway, Suite 211, Englewood, CO 80112
Phone: 303-662-1010
Email: martin.payne@softecinc.com

6.2 developersDen CPAR's Registration

Name: Pat Speer
Address: 6339 Sapphire Pointe Blvd, Castle Rock, CO 80108
Phone: 303-517-8404
Email: pat@developersden.com

7. Resumes

See Team SDNC's USAFA IITA BPA proposal for the resume of our PM, Mr. Martin Payne.

7.1 Task Lead/System Architect - Patrick Speer

SKILLS:

- C# .NET, Java, Visual Basic.NET
- Visual Studio .NET 2005/2008/2010
- Microsoft .NET 1.0/2.0/3.0/4.0
- VBScript, JavaScript, Transact-SQL
- ASP .NET, ADO.NET, WCF
- Team Foundation Server (TFS) 2008/2010
- SQL Server 2005/2008

PROFESSIONAL EXPERIENCE:

developersDen **2007 - Present**

Warfighter's Edge (WEdge) - USAF Academy

Senior Developer/Architect for the WEdge Briefing Software (WEBS) Project

- System requirement analysis
- SOA architecture and design
- Developed the business and data layer for document export/import
- Developed the business and data layer for messages sent between client and server tiers to track system issues and usage
- Developed SSRS 2005 client-side reporting solution for system issues and usage
- Designed and implemented SQL Server 2005/2008 database for server tiers
- Provided technical and design direction for the development team
- Programming (VB.NET, PowerPoint VSTO add-in, WCF Web Services)

Project Lead/Architect for the Aeronautical Advisory and NOTAM Tool (AANT)

- System requirements analysis
- Programming (C# .NET, WCF Web Services)
- Provided technical and design direction for the development team

Project Lead/Architect for the WEdge Viewer Lite Project

- Project Management including project planning, Scrum, and PMR's
- Software Architecture tasks including design documents and DoDAF artifacts
- Provided technical and design direction for the development team
- Software Development tasks including Fortifying code scans and IA support
- Configuration Management tasks including TFS source control and build configurations

Project Lead/Architect for the WEdge Shuttle Enhancements Project

- Project Management including project planning, Scrum, and PMR's
- Software Architecture tasks including design documents and DoDAF artifacts
- Provided technical and design direction for the development team
- Software Development tasks including Fortify code scans and IA support
- Configuration Management tasks including TFS source control and build configurations

Project Lead/Architect for the Point Analysis Tool (PAT) Project

- Project Management including project planning, Scrum, and PMR's
- Software Architecture tasks including design documents and DoDAF artifacts
- Provided technical and design direction for the development team
- Software Development tasks including Fortify code scans and IA support
- Configuration Management tasks including TFS source control and build configurations

Project Lead/Architect for the Mission Planning Route Translator (MPRT)

- Project Management including project planning, Scrum, and PMR's
- Software Architecture tasks including design documents and DoDAF artifacts
- Provided technical and design direction for the development team
- Software Development tasks including Fortify code scans and IA support
- Configuration Management tasks including TFS source control and build configurations

EDUCATION AND CERTIFICATIONS:

- B.S. Degree: Physics, *The Ohio State University*
- Microsoft Certified Trainer (MCT)
- Microsoft Certified Systems Engineer (MCSE)
- Microsoft Certified Solutions Developer (MCSD.NET)
- Microsoft Certified Database Administrator (MCDBA)
- Sun Certified Programmer for the Java 2 Platform
- Microsoft Certified Professional Developer: Enterprise Applications (MCPD: Enterprise)

AWARDS AND RECOGNITION:

- Selected as an *MCT Ambassador* for the Visual Studio 2005/SQL Server 2005 launch event
- Authorized by Microsoft to deliver the *.NET Developer's Tour* training sessions
- Recognized for outstanding achievement in Software Development by Odd Lots Stores
- Recognized for outstanding achievement in Project Management by RJR/Nabisco

7.2 Senior Developer - Daniela Trapani

SKILLS:

- C# .NET, Visual Basic.NET
- Visual Studio .NET 2005/2008/2010
- Microsoft .NET 1.0/2.0/3.0/4.0
- VBScript, JavaScript, Transact-SQL
- ASP .NET, Windows Desktop Development, ADO.NET, XML Web Services, WCF
- Team Foundation Server (TFS) 2008/2010
- SQL Server 2005/2008

PROFESSIONAL EXPERIENCE:

developersDen **2007 - Present**

Warfighter's Edge (WEdge) - USAF Academy

Senior Developer for the WEdge Briefing Software (WEBS) Project

- Developed security infrastructure for client UI (Tier 3)
- Helped develop client UI communication capabilities
- Helped develop file subscription communication between client UI and SQL Server
- Programming (VB.NET, PowerPoint VSTO add-in, WCF Web Services)

Senior Developer for the Aeronautical Advisory and NOTAM Tool (AANT) Project

- Created PFPS plug-in communication architecture
- Designed and developed plug-in UI
- Designed and developed storage mechanism for user preferences
- Programming (C# .NET, FalconView API)

Senior Developer for the WEdge Viewer Lite Project

- Updated UI to incorporate Viewer Lite capabilities
- Unit Tests
- Programming (C# .NET, WCF Web Services)

Senior Developer for the WEdge Shuttle Enhancements Project

- Modified code to disconnect UI from FalconView
- Modified UI code to interact successfully in a disconnected environment
- Unit Tests
- Programming (VB.NET, WCF Web Services, SQL Server 2008)

Senior Developer for the Point Analysis Tool (PAT) Project

- Created PFPS plug-in communication architecture
- Designed and developed plug-in UI
- Designed and developed storage mechanism for user preferences
- Unit Tests
- Programming (C# .NET, FalconView, SDK)

Senior Developer for the Mission Planning Route Translator (MPRT)

- Modified Windows UI for a more user-friendly experience
- Updated code to determine which importers/exporters are supported
- Created JMPS component for collaboration between standalone application and JMPS
- Created PFPS exporter class used to connect to PFPS route server for route translation
- Programming (C# .NET, JMPS, SDK)

EDUCATION AND CERTIFICATIONS:

- B.S. Degree: Aeronautical Engineering, *The Ohio State University*
- Microsoft Certified Trainer (MCT)
- Microsoft Certified Application Developer (MCAD.NET)
- Microsoft Certified Solutions Developer (MCSD.NET)
- Microsoft Certified Professional Developer: Enterprise Applications (MCPD: Enterprise)
- Certified Technical Trainer (CTT)

AWARDS AND RECOGNITION:

- *Outstanding Woman in Technology*, TopCat 2002
- Authorized by Microsoft to deliver the *.NET Developer's Tour* training sessions

7.3 Network Engineer - Steve Trapani

SKILLS:

- Microsoft Exchange Server 2003/2010 including OWA and Mobile Devices
- Microsoft SharePoint Server 2007/2010
- Microsoft Lync Server 2010
- Microsoft Team Foundation Server 2008/2010
- Microsoft System Center Virtual Machine Manager
- Windows Server 2008 R2 with Active Directory/DNS
- Windows Cluster Server
- Microsoft Data Protection Manager including data backup and disaster recovery
- IIS 6.0/7.0
- Microsoft ISA Server (Proxy/Firewall/VPN)
- Microsoft Hyper-V Management
- Retina Vulnerability Scanner

PROFESSIONAL EXPERIENCE:

developersDen **2004 - Present**

Warfighter's Edge (WEdge) - USAF Academy

Systems/Network Administrator ***2007 - Present***

- Setup application testing platforms (Hyper-V and VMware)
- Administer Active Directory environment
- Administer Microsoft Exchange email accounts
- Monitor internet traffic through ISA Server
- Support VPN connections for off-site working environments
- Desktop, server, and mobile device support
- Install and configure new hardware/software (server/workstation/network/peripherals)
- Maintain storage arrays (Dell EqualLogic, EMC Celerra NX4)

Director of IT Services ***2004 - Present***

- Support and maintain company equipment (server/workstation/network/peripherals)
- Support and maintain company website
- Support clients with network, email, and website issues
- Update website content for clients including graphic design

Nationwide Insurance Company **1999 - 2003**

Software Specialist/System and Network Support

- Installed/supported software remotely on user systems
- Installed/supported network devices at remote user locations
- Patched/updated servers and workstations for Y2K compliance
- Designed and maintained company portal web interface

EDUCATION AND CERTIFICATIONS:

- Microsoft Certified IT Professional (MCITP - Windows Server 2008 Active Directory)
- EC-Council Certified Ethical Hacker (C|EH)
- IACRB Certified Penetration Tester (CPT)
- CompTIA Security+
- Microsoft Certified Professional (MCP)

7.4 Senior Analyst - Chad Mello

CAPABILITIES:

- Project Leadership and Development Team Organization
- System Analysis
- Full Software Development Cycle Support
- Technical and ROI Documentation
- Q&A Testing and Documentation
- Technical Lead for Core Framework Design and Implementation
- Full Scrum Development Cycle Support
- Critical Software Enhancements
- Analysis and Feasibility Research
- System Integration
- Code Porting

PROFESSIONAL EXPERIENCE:

Intelligent Software Solutions **2009 - 2012**

Senior Analyst and Project/Tech Lead for the United States Air Force

- Product lead for critically utilized software client designed for the Air Force and Warfighter planning. This software is designed to help exact strikes and training, thereby ensuring successful missions with maximum enemy kills whilst reducing personnel and civilian casualties.
- Technical lead and designer for total revamp of core infrastructure and product framework for Warfighter planning/mission system.
- Proven skills and experience in both theoretical and applied software framework design. Able to express and demonstrate a solid design proposal upon which to build the next generation of the product going forward; this design proposal was accepted, and is currently being implemented.
- Geospatial technology integration experience using custom web services, .NET, WCF, and embedded globe clients such as Google Earth.

Digital Science West **2004 - Present**

Freelance Software Engineer & Developer, various clients include the United States Air Force

- Full software development cycle support - this includes:
  - Utilizing off-the-shelf software utilities for gathering requirements
  - Project planning & management tools to establish project goals and timelines
  - Modeling software to help establish framework, databases, and structures
  - Source code repositories for safe keeping and backups
  - Unit testing procedures, and beta tracking procedures
  - Support-tracking software for addressing feature requests and bug fixes
- Note: The most recent projects (since 2004) have been developed within a managed environment. This means that ***project planning and tracking software, source code repositories, modeling software, and off-the-shelf project management tools*** were utilized to help secure successful, timely software completion and delivery. These tools varied from project to project. *Able to adjust to and utilize any preferred development tools that have been established as part of the project.*
- Work heavily with Microsoft .NET 2.0 & 3.5 as well as 4.0 platforms, languages and tools - C# and VB.NET in VS 2005, VS 2008, and VS 2010 environments. Additionally, experienced in WinForms, ADO.NET, WPF, WCF, Windows API (95, 98, 2000, XP, CE), FoxPro, VC++, COM, Jet, and SQL Server 2000, 2005, and 2008, sprocs; also, latest inter/intranet development with ASP.NET 2.0, 3.5 & 4.0, Community Server, .Net remoting, web classes, web forms, Ajax and JavaScript.

Achievements include:

- Technical and Project lead for the United States Air Force developing framework and logistical engine for High-profile Warfighter's critical mission planning and briefing software, WEdge (Warfighter's Edge).
- A total product re-write based on highly interactive WPF user interfaces, C#, .NET 3.5, VS 2008, COM interop, C++, and VB.NET.
- Completed customized financial advisory web site based on Community Server 2008.5, .NET 2 & 3.5, Visual Studio 2008, SQL Server 2005. Was the main software developer on this project.
- Completed several web site projects based on Community Server 2007 & 2008 sites based heavily on ASP.NET & C#; also involved with producing custom web controls, JavaScript, SQL Server 2005 & sprocs, and styling with CSS. This project was very large and requried the combined effort of several teams in multiple countries.
- Produced the company's web site (www.digisciwest.com) using ASP.NET with Ajax extensions - simple but effective.
- Enterprise store management suite that enables items, item pricing, and sales changes to be pushed and pulled to and from multiple stores in various regions and chains. This suite helps corporations to manage multi-store information from one location. Based on ASP.NET 2.0, C#, VB.NET, and SQL Server 2005.
- Windows CE-based hand held inventory software application for scanning and reconciling inventory items using various wireless ARMS and MIPS machines. Based on .NET compact framework, C# using TCP, and VB (TCP server built using VB6).
- Design, development, and implementation of highly complex, rule-driven frequent diner/customer loyalty system based 100% on .NET (C#) and SQL Server 2000. Plugs into Point of Sale systems used in hospitality industry.
- Developed Windows Purchase order and Inventory System: Available as a smart client application as well as and Intranet-based system on ASP.NET 1.1.
- Developed a sophisticated Windows Chemical Mixture System used to mix and monitor chemical usage, adjustments and cost.
- Developed a Windows digital imaging and cataloging system. Automated image capturing and image manipulation, produced printed, custom catalogs for customers as well as exported HTML web pages for their online catalog system (including thumbnail images).
- Developed automated Windows software to collect and process data from various PLCs attached to complex machinery. The resultant critical reports and graphs were used to report to EPA and other government agencies and therefore had to be accurate.

Restaurant Data Concepts **1997 - 2004**

Software Analyst/Developer/Project Leader

- Designed and developed an entire distributed framework for our product's Back Office software using Visual Basic 6.0, VC++, and VB.Net. All aspects from GUI (presentation layer) to middle tier and on through to the backend database is based on COM/DCOM and also utilizes ActiveX, HTML, DHTML, OLEDB, ADO, MSDE, SQL Server-7, IE5, and XML to provide a very scalable, flexible, and cohesive product. Also, an ASP.NET frontend was added to provide an intranet-based "desktop" built from the same object model.
- Designed and developed very functional and sophisticated labor scheduling system as part of the new back office product. Allows for drag & drop time bars, forecasting, labor templates, labor availability, etc. (currently converting to ASP.NET application).
- Designed an information routing system that directs documents, XML, and other sorts of data through a COM-based infrastructure to its proper destination.
- Introduced the company to proper documentation and software development techniques and to such technologies as Relational databases, Direct-X, OLEDB, Inter/Intranet, XML,

COM/DCOM, RAS, Source Safe, Object Based Development and radical code reuse - beyond that of any RAD environment when used alone.

- As a direct result of my team's efforts and resolution to utilize modern technologies to our advantage, the company has restructured much of its product to meet new standards.
- Reviewed resumes and interviewed potential individuals for programming positions within RDC
- *Many more development projects and responsibilities can be supplied and elaborated on upon request.*

KYRAN Research & Associates **1996 - 1997**

Software Developer/Analyst

- Played a major role in developing a huge distributed system based on MS SQL Server for the Massachusetts Department of Public Health for child immunization tracking and predicting. This project had lasted for almost the entire year that I worked for this company. It was quite extensive and involved an extremely complex data synchronization mechanism that was written from scratch.
- Developed an entirely new COM object system for direct ODBC manipulation.
- Developed a RPC mechanism for use on SUN operating system so as to communicate between SUN and Windows systems.
- *More projects can be listed upon request.*

Providence Metallizing, Inc. **1992 - 1996**

Programmer

- Helped to develop complex order entry, customer pricing, and order distribution system for WANG VS 5000 in COBOL.
- Developed Windows software (based on VB2 and VB3) to import information from WANG to expand our system's capabilities to the PCs within our company.
- Acquired proper database and software design skills as well as keen systems analysis skills.
- Designed many VB programs that performed various tasks throughout the manufacturing plant as well as interfaced with Programmable Logic Cards for controlling Machines and their cycles.

EDUCATION AND CERTIFICATIONS:

- M.S. PhD, Computer Science, University of Colorado, 2010 - Present
  - Currently involved in PhD candidacy work in an ongoing research project through UCCS, UC Denver, and UC Anschutz School of Medicine.
- B.S. Computer Science, College of Santa Fe, 2004 - 2009
- Computer Science, University of Rhode Island, 2002 - 2004
- A.S. Computer Science, Community College of RI, 1996 - 1999

SECURITY CLEARANCE:

- Active Top Secret Clearance

7.5 SQA Engineer - Mark Orlicky

CAPABILITIES:

- Skilled in software testing, configuration management, quality assurance, database modeling, computer security, analytical studies, and technical writing
- 6 years experience as Software Quality Assurance lead
- 8 years experience using the SEI's Capability Maturity Model (CMM) as a developer, Project Manager, Software Quality Assurance Lead, and Software Configuration Manager (SCM)
- 25 years experience managing, using, and developing computer programs
- 5 years as a Risk Manager Lead
- 8 years as a Metrics Lead
- 2 years as a Lessons Learned Lead
- Highly motivated; committed to project completion within schedule
- Experienced, active participant in Total Quality Management (TQM) programs
- In depth experience working with Federal organizations, including the Air Force

PROFESSIONAL EXPERIENCE:

SofTec Solutions, Inc. **2011 - Present**

Software Quality Assurance Engineer for the US Air Force Academy

- Provide Software Quality Assurance Testing on a wide variety of software applications. Tests requirement implementation, assists with customer acceptance testing, reviews developers' unit testing, and oversees peer reviews of developed code. Requirements Management Lead, working with customers to define initial requirements, refine the requirements, update the requirements during development, and author the Software Requirements Specification (SRS) and the Requirements Traceability Matrix (RTM) for the contract. Works in a Scrum/Agile software development environment, requiring good teamwork interpersonal skills. Uses the Team Foundation Server (TFS) product suite, including Visual Studio and Test Management System, to manage requirements and document tests. Provides leadership skills and knowledge in Metrics Analysis, Lessons Learned, Process Improvement, Risk Management, and Documentation Management.

Accomplishments:

- Successfully led test projects for three development efforts in first six months, earning plaudits from government customer.
- Wrote 9 high quality contract deliverable documents for team. Recognized by team as skilled author, always able to help them out with their documents.

L-3 COMMUNICATIONS **2009 - 2011**

Deputy Organization Manager

- Deputy Organization Manager, backup to Organization Manager for all elements of the Organization.
- Interfaced directly with senior members of the Joint Requirements Development Center (JRDC) management as well as senior members of the Government staff in a consultant role and a technical expert / advisor in DMETS activities.
- Responsible for representing DMETS in future plans to include future BMDS element integration, expansion into theater/regional training, and coordination with exercises and wargames.
- Developed IMP/IMS, knowledge of JRDC proposal, contract, and budget practices.

- Responsible for supporting DMETS process improvement activities, implementing Capability Maturity Model Integration (CMMI) compliant processes, and identifying appropriate evidence for external process reviews, audits, and appraisals.
- Lead for DMETS Metrics, CCB, Lessons Learned, and Risk Management activities.

L-3 COMMUNICATIONS **2002 - 2009**

Staff Systems Analyst, Process Engineer

- Audited software processes to verify SOW and CMMI compliance.
- Identified and gathered evidence, using the SEI's CMMI as guidance.
- Facilitated TQM Process Improvement working groups.
- Performed Quality Control checks of Oracle forms, Test Plans, and deliverables.
- Performed at company level as a CMMI auditor and audit team member of other projects.
- Lead Risk Management, Lessons Learned, and Metrics programs.

Accomplishments:

- Process Engineer during successful project to improve to CMM Level Five. Facilitated process improvements, championed changes, worked with teammembers in total integration effort.
- Wrote numerous procedures to document project roles and responsibilities. Commended during successful procedures review by SEI auditors.
- Metrics Lead for FTO/OTS and for MDSEC. Helped write JRDC Metrics Plan, conforming with prime contractor's overall Metrics Plan, while addressing contractual and customer expectations
- Participated in over 10 CMMI appraisals as an audit team member for the company. Independently audits QA compliance for L-3.

L-3 COMMUNICATIONS **2000 - 2002**

Staff Systems Analyst, Lead Configuration Management Analyst

Audited and analyzed baseline configurations of several "legacy" software systems. Managed change process, controlled changes, and performed on-site audits of software, hardware, documentation, and configuration management procedures.

Accomplishments:

- CM Lead during successful project to improve to CMMI Level Three. Facilitated process improvements, championed changes, worked with teammembers in total integration effort.
- Wrote numerous procedures to document CM roles and responsibilities. Commended during successful procedures review by SEI auditors.

L-3 COMMUNICATIONS **1995 - 2000**

Staff Systems Analyst, Quality Assurance Engineer

Audited software products and processes to verify SOW and CMMI compliance. Performed SQA actions, using the SEI's CMM as guidance. Facilitates TQM Process Improvement working groups. Performed Quality Control checks of Oracle forms, Test Plans, and deliverables. Performed at company level as a CMM auditor of other projects.

Accomplishments:

- SQA Lead during successful project to improve to CMM Level Two. Facilitated process improvements, championed changes, worked with teammembers in total integration effort.
- Wrote numerous procedures to document SQA roles and responsibilities. Commended during successful procedures review by SEI auditors.
- Selectively chosen to replace QA manager (one year duration).

Loral Communication Systems **1995**

Senior Software Test Engineer

Planned, and executed software regression tests for satellite control software on IBM mainframe computer. Reviewed and rewrote all test procedures to match operational requirements and standards.

Accomplishments:

- Excellent results from all tests performed as a result of attention to detail
- Selectively chosen to "QC" written testing correspondence.

Northern NEF, Inc **1994 - 1995**

Senior Software Configuration Management Engineer

Audited and analyzed baseline configurations of several "legacy" software systems. Performed on-site audits of software, hardware, documentation, and configuration management procedures.

Accomplishments:

- Excellent results from qualitative analysis audits provided valuable insights; even the draft reports were highly coveted and praised by the customers.

NATO **1991 - 1993**

Chief, Computer Support Branch

Directed mainframe computer center operations to provide Command and Control support around the clock. Managed personal computer support for 650 personnel. Computer Policy Director, Computer Security Director, and project manager for two large computer projects. Supervised 22 multinational military and civilian personnel.

Accomplishments:

- As Project manager for a large networking and downsizing / re-engineering project, planned, budgeted, and acquired computers, software, and maintenance support. The project remained on schedule despite budget cutbacks and personnel reductions.

Air Force Operational Test and Evaluation Center **1985 - 1989**

Chief, Modeling And Simulation Branch

Managed simulation modeling support for all aspects of the operational testing of major defense systems: test design including identification of critical factors; selection, development, and validation of computer models; and management of contractors. Supervised 7 analysts.

Accomplishments:

- Organization expert on validation of computer models; selectively chosen as representative for key conferences. Wrote two test plans which were well received by using agencies.
- Organization expert in contracting for modeling and simulation; technical selection authority for 6 large model analysis contracts.

Air Force Center for Studies and Analyses Center. **1981 - 1985**

Chief, Computer Models Team / Modeling Simulation Analyst

Senior computer applications analyst for 15 operations research analysts, providing IBM mainframe computer debugging support; emphasizing IBM utilities. Programmed in Fortran, Jovial, Cobol, and PL/I computer languages on IBM mainframes and Sun Workstations.

Accomplishments:

- Key analyst for several classified studies which were presented to Congress and the White House. Results were used to select weapon systems and make billion dollar purchases.

EDUCATION AND CERTIFICATIONS:

- M.S. Degree: Systems Management Minor: Information Systems, University of Southern California (USC)

- B.S. Degree: Mathematics Minor: Computer Science, New Mexico State University (NMSU)
- Certificate Program: Total Quality Management (TQM)
- Certificate Program: Oracle Data Base Administration (DBA), Colorado Technical Institute

SECURITY CLEARANCE:

- Active Top Secret Clearance

Appendix A - Project Schedule

ID	Duration	Task Name	Start	Finish
1	0 days	Call Order Award	Mon 4/9/12	Mon 4/9/12
2	0 days	Call Order Kick-Off	Mon 4/9/12	Mon 4/9/12
3	9 days	Develop Test Plan	Mon 4/9/12	Thu 4/19/12
4	0 days	D1 Test Plan	Thu 4/19/12	Thu 4/19/12
5	**2 days**	**Sprint 0**	**Mon 4/9/12**	**Tue 4/10/12**
6	2 days	Detailed Project Planning	Mon 4/9/12	Tue 4/10/12
7	0 days	D10 Project Plan Update	Tue 4/10/12	Tue 4/10/12
8	**10 days?**	**Sprint 1**	**Wed 4/11/12**	**Tue 4/24/12**
9	**10 days?**	**Sprint 1 Code writing iteration**	**Wed 4/11/12**	**Tue 4/24/12**
10	1 day?	Sprint Planning	Wed 4/11/12	Wed 4/11/12
11	9 days	Coding: Details to be Filled in After Sprint 1 Planning	Thu 4/12/12	Tue 4/24/12
12	0 days	D2 Code Review Results	Tue 4/24/12	Tue 4/24/12
13	0 days	D3 Code Scans	Tue 4/24/12	Tue 4/24/12
14	0 days	D5 Status Report	Tue 4/24/12	Tue 4/24/12
15	0 days	D12 Software Requirements Specification (SRS)	Tue 4/24/12	Tue 4/24/12
16	0 days	D13 Requirements Traceability Matrix (RTM)	Tue 4/24/12	Tue 4/24/12
17	0 days	Sprint Results Demonstration	Tue 4/24/12	Tue 4/24/12
18	0 days	Sprint Review	Tue 4/24/12	Tue 4/24/12
19	**10 days?**	**Sprint 2**	**Wed 4/25/12**	**Tue 5/8/12**
20	1 day?	D10 Project Plan Update	Wed 4/25/12	Wed 4/25/12
21	**10 days?**	**Sprint 2 Code Writing Iteration**	**Wed 4/25/12**	**Tue 5/8/12**
22	1 day?	Spring Planning	Wed 4/25/12	Wed 4/25/12
23	9 days	Coding: Details to be Filled in After Sprint 2 Planning	Thu 4/26/12	Tue 5/8/12
24	0 days	D2 Code Review Results	Tue 5/8/12	Tue 5/8/12
25	0 days	D3 Code Scans	Tue 5/8/12	Tue 5/8/12
26	0 days	D5 Status Report	Tue 5/8/12	Tue 5/8/12
27	0 days	D12 Software Requirements Specification (SRS)	Tue 5/8/12	Tue 5/8/12
28	0 days	D13 Requirements Traceability Matrix (RTM)	Tue 5/8/12	Tue 5/8/12
29	0 days	Sprint Results Demonstration	Tue 5/8/12	Tue 5/8/12
30	0 days	Sprint Review	Tue 5/8/12	Tue 5/8/12
31	**3 days**	**Sprint X**	**Wed 5/9/12**	**Fri 5/11/12**
32	3 days	Wrap-Up and Final Deliverables Preparation	Wed 5/9/12	Fri 5/11/12
33	0 days	D9 Technical Software Design Document and Reviews	Fri 5/11/12	Fri 5/11/12
34	0 days	D13 Requirements Traceability Matrix (RTM)	Fri 5/11/12	Fri 5/11/12
35	0 days	D11 Capabilities Briefing	Fri 5/11/12	Fri 5/11/12
36	0 days	D14 Software Version Description (SVD)	Fri 5/11/12	Fri 5/11/12
37	**0 days**	**Agenda for Program Management Review including Status Report Update (D5)**	**Tue 5/1/12**	**Tue 5/1/12**
39	**0 days**	**D7 Program Management Review (PMR)**	**Wed 5/2/12**	**Wed 5/2/12**
41	**20 days**	**Agenda for Status Meeting - Tuesdays for Duration of T1 and T2**	**Tue 4/17/12**	**Tue 5/15/12**
47	**20 days**	**D8 Status meeting - Wednesdays for Duration of T1 and T2**	**Wed 4/18/12**	**Wed 5/16/12**

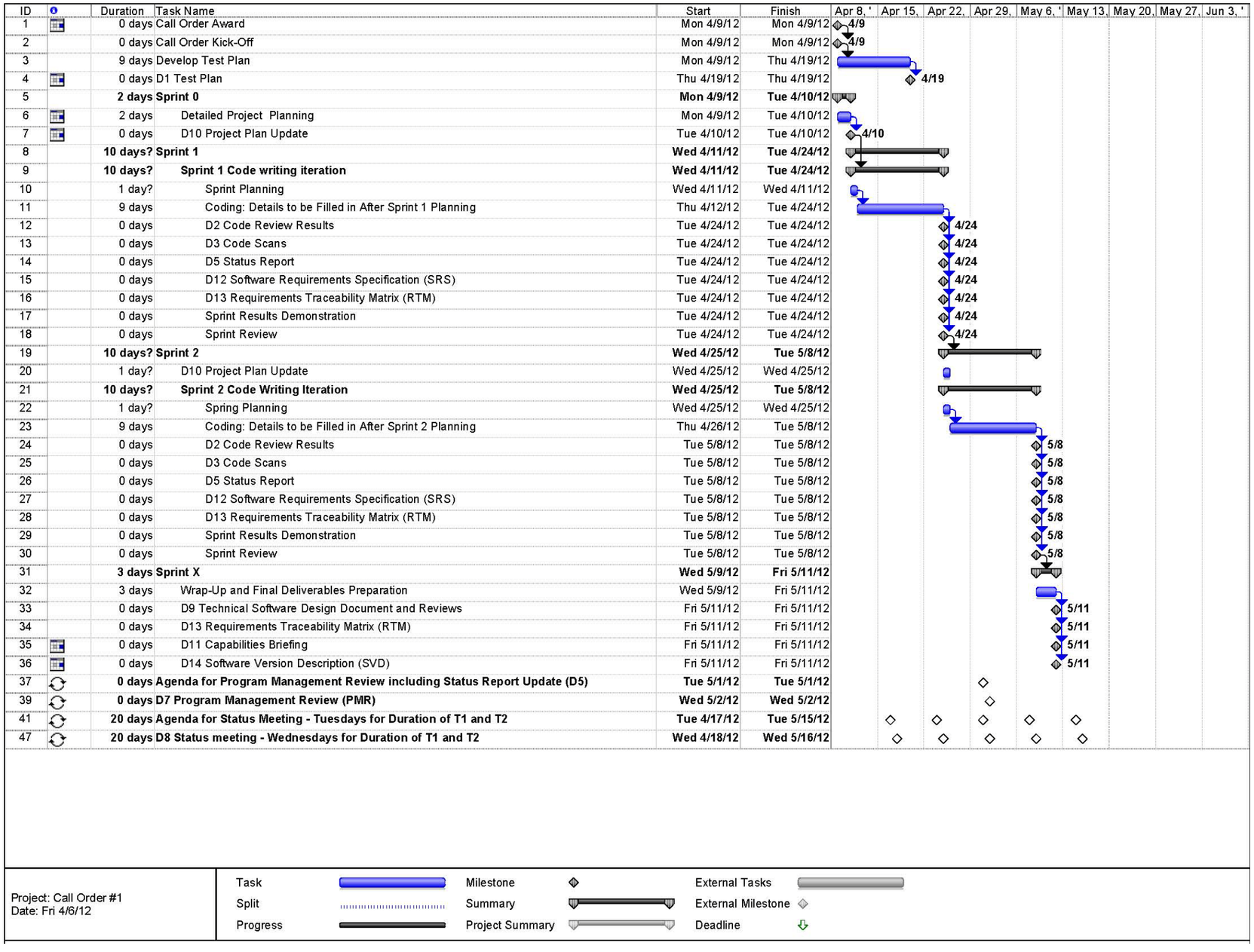

Exhibit 1.8. Project Schedule.